SEVERITY AND THE UTILIZATION OF SERVICES IN A UNIVERSITY COUNSELING CENTER

by

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ABSTRACT

The objective of this study was to examine patterns over time related to severity and utilization of mental health services in a university setting. Twelve years of archival data from a university counseling center were analyzed, which included a total of 8,623 clients and 83,095 sessions. Various descriptive analyses and regressions were used to answer research questions about trends of severity and utilization between 1999 and 2011. The main findings were: a) there were small increases in severity with time for some measures of severity (total OQ-45score, specific OQ-45items, and mental health history); b) a small percentage of users accounted for a large percentage of service usage (i.e. top 20% utilized 64% of services); c) the percentage of services that these high utilizers accounted for did not grow over time; and d) clients who had higher initial OQ-45scores, prior counseling, prior suicide attempts, prior hospitalization for mental health concerns, use of psychotropic medication, and a family member diagnosed with a mental disorder tended to utilize more sessions.

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CHAPTER I

INTRODUCTION

The severity of mental health concerns among university students is frequently cited in the popular press (Cantor, 2010; Gabriel, 2010; Sieben, 2011). Suicide is the second leading cause of death among college-age students, and the suicide rate has increased dramatically since the 1950s (Centers for Disease Control, 1997; see also Gallagher, 2011). College counseling center directors have also reported an increase in suicides, violence, and student use of psychiatric medication. Up from 16% in 2000, directors indicate that 37% of their clients had severe psychological problems (Gallagher, 2011). Not surprisingly, the presence of severe mental health problems interferes with academic performance and retention (Choi, Buskey, & Johnson, 2010; Whipple, Lambert, Vermeersch, Smart, Nielsen, & Hawkins, 2003; Wilson, Mason, & Ewing, 1997) and, at times, impacts the safety of the campus community. College counseling centers have a commitment to the safety and academic mission of the campus community (AUCCCD, 2012); thus, the management and treatment of student mental health problems remains a priority for university systems (Cooper & Archer, 2002; Kitzrow, 2003; Phillips-Miller & Morrison, 1999).

University counseling centers (UCCs) have played an important role in the life of students on campus for several decades. In the 1970s, UCCs primarily offered services to

students with normative developmental concerns (e.g., career planning, roommate conflict, etc.), while more severe mental health concerns were rare and referred to outside providers (Gilbert, 1992; Hodges, 2001). Relationship concerns were the most frequently reported problem for college students seeking services. During this time, there was also a new focus on preventative and developmental outreach programs, which viewed the institution and environment as a client (Corazzini, Wilson, & Huebner, 1977; Morrill & Hurst, 1971). In the 1990s, anxiety surpassed relationship concerns as the most prevalent presenting concern (Benton, Robertson, Tseng, Newton & Benton, 2003). Concomitantly, the mission of UCCs has moved away from primarily vocational/developmental to include psychotherapy, education and consultation regarding mental health issues, and crisis intervention (Corazzini, 1997; Hodges, 2001). For example, many UCCs have increased crisis and triage services and offer ongoing treatment for students with chronic mental health problems (Corazzini, 1997; Gabriel, 2010; Gallagher, 2011). These increases in counseling and triage services may increase efficiency (Hardy, 2011), but they also limit the ability of UCCs to serve in traditional community-focused preventative roles.

There remains considerable debate regarding the degree to which the severity of mental health concerns among students has actually increased (Gilbert, 1992; Pledge, Lapan, Heppner, Kivlighan, & Roehlke, 1998; Sharkin, 2004a), as well as the best way to serve students in less than ideal funding environments (Corazzini, 1997; Hodges, 2001). To maintain and improve the quality of services at UCCs, it is necessary to understand both the characteristics of UCC clients as well as the ways they are utilizing services. To do so, I will review the history of college counseling centers in the United States,

including their intended purpose and findings on their effectiveness. Following this, I will review two major issues that impact UCCs, including: 1) arguments and findings in regards to the increasing severity of concerns with which students present at college counseling centers and 2) the utilization of UCC services. The latter will begin with a brief summary of relevant findings regarding the utilization of health care in the United States that may have specific application to UCCs, focusing specifically on its skewed distribution. Then I will review trends in utilization for the mental health sector, including findings on the number of students served at college counseling centers. Finally, I will conclude by introducing predictors of high utilization in health care as a framework for predictors of utilization in mental health services including UCCs.

University Counseling Centers in the United States

Contextual factors such as economics, world events, and technology have continuously influenced the college student population over the past 60 years. As a result, the demographics, backgrounds, and needs of college students have changed, subsequently impacting their mental health needs (Hodges, 2001). The role of university counseling centers has evolved in response. In this section, I will summarize the historical changes related to the purpose of UCCs and then address the current purpose and effectiveness of UCCs.

Purpose of university counseling centers

Counseling centers were originally formed following World War II in response to the growing educational and vocational needs of returning veterans who were attending

universities nationwide (Forrest, 1989; Mack, 2004). This period involved the emergence of nontraditional students, and counseling centers were tasked with assisting with this transition—primarily assisting students with academic and vocational concerns (Forrest, 1989). In the decades that followed, the counseling center evolved into a domain housed within but separate from student affairs, requiring more specialized training and encompassing a broader realm of responsibility for more private concerns of students (Forster, 1977; Hodges, 2001). By the 1960s, counseling centers offered a wide variety of psychological services, including individual, couples, and group counseling, assessment, consultation, and crisis management (Aubrey, 1977; Hodges, 2001). Though the relative prominence of particular presenting concerns has shifted over time, since the 1960s, the scope and mission of university counseling centers has remained largely the same (Boyd et al., 2003; Forrest, 1989; Hodges, 2001; Humeidan, 2012; Sharkin, 2004a)—to support student mental health and well-being, particularly when the issue interferes with a student's ability to function academically (Boyd et al., 2003; Sharkin, 2004a).

At present, UCCs tend to provide the following services: individual counseling, group counseling, career counseling, couples counseling, crisis appointments, consultation, assessment, and outreach (Boyd et al., 2003). Although the relative frequency of these services likely varies across settings, counseling is typically the most prominent role of UCCs. Boyd and colleagues also noted that UCCs hold a preventative role, where they assist students in building skills that will help them achieve their academic and long-term life goals. This also includes UCCs' responsibility to engage in outreach and consultation to promote healthy student development (Boyd et al., 2003). With the evolving demographic make-up of college students, the approach to the delivery

of these services has changed over time. In recent years, there has been a shift towards a medical model in some centers, with a focus on medication and diagnosis (Gallagher, Gill, & Goldstrom, 1999). The amount of services available has also changed with the needs of the students. For example, most counseling centers operate under a brief-therapy model, which allows a maximum of 8-12 sessions annually for each client, though others do not have formal session limits (Gallagher, 2011; Vonk & Thyer, 1999). This short-term design is not intended for treating clients with severe psychopathology (Wolgast, Rader, Roche, Thompson, Zuben, & Goldberg, 2005). More recently, some counseling centers are shifting towards a primary focus on crisis services due to increased severity and demand (Gallagher, 2011).

Effectiveness of university counseling centers

The effectiveness of UCCs in meeting their mission has been studied in two realms: academic outcomes and symptom improvement. Mental health treatment is effective in decreasing the impact of mental health concerns on academic achievement (Choi et al., 2010; Illovsky, 1997; Wilson et al., 1997). For example, there is generally a positive relationship between positive academic outcomes and use of UCC services (Sharkin, 2004a). In the National Survey for Counseling Center Directors, 63% of participating schools asked former clients about their experiences in counseling. In this survey, 56% of clients indicated counseling helped them remain in school, and 61% reported that receiving services improved their academic performance (Gallagher, 2011). When retention rates were compared between students receiving counseling and students in the general student population (not receiving counseling), Illovsky (1997) found 75%

of students continued in school, whereas only 68% of students in the comparison group returned (no statistical tests were conducted and the samples were not matched). However, these effects were not consistent across groups. For freshman, seniors, and graduate students, counseling had positive effects on retention, whereas juniors experienced no effect, and sophomores were more likely to return to school if they had not attended counseling. Similarly, Wilson, Mason, and Ewing (1997) found the retention rate for students who received counseling was 14% higher than students who did not receive counseling, and retention was positively related to number of counseling sessions attended. Another study used clinical (pretreatment and posttreatment Outcome Questionnaire-45 scores; a client-report instrument designed to measure change in client levels of distress over time; Lambert et al., 2004) and academic (two relevant subscales of the Student Adaptation to College Questionnaire; Baker & Sryik, 1989) outcome measures to look at how university counseling centers facilitate academic functioning. Results demonstrated that students who made clinically significant improvement in their personal distress also reported higher improvement in their academic commitment and problem resolution (students' perceptions of how well they are able to handle and solve problems which brought them to counseling; Choi et al., 2010).

There are relatively few studies concerning the effectiveness of UCCs in improving the mental health of students. However, the limited research available indicates that clients who receive services at UCCs experience reductions in symptoms (Minami et al., 2009; Vonk & Thyer, 1999). Vonk and Thyer (1999) used the Symptom Checklist-90-R (SLC-90-R), a 90 item self-report measure of client psychological symptoms within the past 7 days (Derogatis, 1992). The SCL-90-R encompasses nine

symptom dimensions: somatization, obsessive-compulsive, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation, and psychoticism. They administered the SCL-90-R at intake and termination for clients receiving short-term therapy, and at intake and after 6 weeks without treatment (while on a naturally occurring waitlist). They found clinically significant improvement in symptoms for the students receiving immediate treatment, whereas students who were on the waitlist did not improve until participating in treatment. In another study, Snell and colleagues found 68% of clients reported a reduction in symptoms from pretreatment to follow-up, but only 32% achieved clinically significant change (Snell, Mallinckrodt, Hill, & Lambert, 2001). More recently, Minami and colleagues (2009) used the Outcome Questionnaire-45 (OQ-45) to measure client distress prior to each counseling session. In analyzing client data over a span of 8 years, they found treatment to be very effective for clients with clinically significant distress: approximately 80% of clients attending two or more sessions were significantly better off than a benchmark established from a meta-analysis of patients in wait-list control conditions. In another study, approximately 27% of clients who met or exceeded the clinical cut score for the depression subscale of the Counseling Center Assessment of Psychological Symptoms-62 (CCAPS-62) dropped into the nonclinical range at their last observation (Boswell, McAleavey, Castonguay, Hayes, & Locke, 2012).

Though UCCs have demonstrated effectiveness, the college population continues to evolve with regard to their mental health needs. UCCs are currently facing two major challenges: a perceived increase in client severity, and how UCCs should respond by offering clinical services to meet student needs. However, the research on increasing

severity of student distress is ambiguous and outdated. In addition, little research has been done related to how college students utilize services at UCCs. I will discuss each of these issues in the following sections.

Mental Health of the College Population

Retention at universities is generally poor (National Center for Higher Education Management Systems, 2005; Tinto, 2006). American College Testing (ACT, 2009) reported that only 66% of first-year college students returned to the same institution for their second year of college in the 2007–2008 academic year, which is representative of retention rates over the past few years. Additionally, a mere 53% of students graduate within 6 years (Carey, 2004). Mental health issues can be detrimental to academic functioning and subsequent long-term goals (Kessler, Foster, Saunders, & Stang, 1995; Vonk & Thyer, 1999). Kessler and colleagues (1995) found anxiety, mood disorders, substance abuse, and conduct disorder predicted failure to continue with education. In a survey by the American College Health Association (ACHA, 2009), 11.1% of students acknowledged that depression impacted their academic performance, while 18.6% of students identified anxiety as a factor that affected their academic performance. Counseling center directors reported that 5.9% of clients are so seriously impaired that they are either unable to remain in school or may remain in school only with extensive treatment (Gallagher, 2011). Clearly, the mental health concerns of students are important for university systems to address. In this section, I will provide an overview of common mental health concerns of college students. Then, I will discuss findings related to the perception of increased severity within this population.

College students and mental health

College and university life presents a number of challenges. Many students experience stress due to the rigorous academic demands of higher education, career planning, romantic relationships, finances, work and school balance, and differentiation from the family unit. For example, more students are facing financial pressure as parents are less able to provide for the financial costs of higher education (Webley, 2012). For many students, college is their first experience with living alone, introducing a number of stressors (accountability to schoolwork, financial independence, roommate conflict, housekeeping, etc.). In contrast, an increasing number of students cope with stress of living at home, such as tension related to parental boundaries (Johnson, 2011). Additionally, late adolescence and early adulthood is a period in which many psychological disorders first manifest themselves (Chisolm, 1998). Recent research suggests that psychopathology is increasing among American college students. Twenge and colleagues (2010) compared Minnesota Multiphasic Personality Inventory (MMPI) and MMPI-2 scores of college students between 1938 and 2007. They found generational increases of approximately one standard deviation on many of the clinical scales: psychopathic deviation, paranoia, hypomania, and depression. Further, they concluded students in the current generation were five times more likely to score above common cutoffs for psychopathology. They suggest these trends may reflect a shift from intrinsic to extrinsic goals (Twenge, Gentile, DeWall, Ma, Lacefield, & Schurtz, 2009).

Given the challenges of young adulthood identity development, coupled with the stressors of the college environment, perhaps it is not surprising that many college students struggle with mental health problems (Kitzrow, 2003). Anxiety and depression

are the two most common diagnoses for which college students seek treatment (ACHA, 2009). Of counseling centers participating in a day devoted to screening students for depression, 27% of all students screened were referred to mental health treatment (Gallagher, 2011). Similarly, 27% of students screened for anxiety were referred to treatment for anxiety. Although these concerns are the most prominent, students suffer from a wide variety of mental health concerns, including eating disorders, relationship issues, grief, sexual assault, PTSD, personality disorders, academic concerns, physical problems, and family issues (Benton et al., 2003).

Some students suffering from mental health concerns begin to experience suicidal thoughts as a result of their distress. National surveys estimate that 12.5% of college students have seriously considered attempting suicide in their lifetime, and 6.1% have seriously considered suicide within the past year (ACHA, 2009). In one study that randomly sampled students from 70 colleges, more than half of all students acknowledged having experienced suicidal thoughts (Brownson, 2010). Eighteen percent of undergraduates and 15% of graduate students indicated they had seriously considered attempting suicide in their lifetime, and 6 and 4% of undergraduate and graduate students (respectively) reported seriously considering attempting suicide within the past year. In another study of college students with a lifetime history of suicidal ideation, 54% experienced episodes during adolescence and young adulthood. Although 87% sought help, they tended to more commonly seek support from family and friends than psychiatrists and psychologists (Arria et al., 2011). Mental health problems appear to be a concern for many college students.

Increased severity in university counseling centers

In a series of annual reports and other studies, many university counseling center directors and staff have reported what they perceive to be an increase in the severity of client issues over the past few decades (Gallagher, Christofidis, Gill, & Weaver-Graham, 1996; Gallagher, Gill, & Goldstrohm, 1997, 1998, 1999; Gallagher, Gill, & Sysko, 2000; Gallagher, Sysko, & Zhang, 2001; Gallagher & Taylor, 2006, 2007, 2008, 2009, 2010; Gallagher, Weaver-Graham, Christofidis, & Bruner, 1995; Gallagher, Weaver-Graham, & Taylor, 2005; Gallagher & Zhang, 2002, 2003, 2004; O'Malley, Wheeler, Murphey, O'Connell, & Waldo, 1990; Robbins, May, & Corazzini, 1985).

Severity can be defined in a number of ways, including chronicity, distress, and presence of particular diagnoses or symptoms. In the reports by Gallagher and others cited above, the definition of severity is variable. The reports are part of a series of surveys that has been conducted since 1981, The National Survey of Counseling Center Directors (NSCCD). These reports include data provided by college and university counseling center administrators in the United States and Canada and address a variety of relevant issues including budget trends, current concerns, innovative programming, and a number of other administrative, ethical, and clinical issues (Gallagher, 2011). In the most recent NSCCD (2011), 91% of respondents endorsed this trend of increased client severity (Gallaher, 2011). They also reported 37.4% of their clients had severe psychological problems—although it was not clear how severity or "severe" psychological problems was defined. Somewhat more specifically, over the past five years, 78% of directors indicated a rise in crisis situations; 77% reported an increase in psychiatric medication issues; and 62% believed the number of learning disabilities has

increased. Between 20% and 50% of directors endorsed increases in illicit drug use, self-injury, alcohol abuse, history of sexual abuse, eating disorders, and sexual assault (in descending order; Gallagher, 2011). Additionally, directors participating in the survey reported an average of 9.4 student hospitalizations in the most recent year, which is more than triple the number of hospitalizations in 1994 (Gallagher, 2011). In these studies, staff and directors' responses were retrospective in nature and reflected their thoughts about changes in client severity over time. Although some centers likely based responses on clinical data, when data were not available, respondents relied on impressions and estimates.

Quantitative studies of severity in UCCs have most commonly used indicators of psychological distress to measure severity. Despite consistent reports from counseling center directors that severity is increasing, the evidence obtained from student reports of psychological distress is unclear. Cornish and colleagues (2000) studied client-reported distress using the Global Severity Index. The Global Severity Index is the mean score of all items on the Brief Symptom Inventory (a short form of the SCL-90-R; Derogatis, 1993). They found no overall increase in distress over the 6-year period from 1986 to 1992. However, there were time limited increases during smaller periods—1988 -1989 and 1990-1991 (Cornish, Riva, Henderson, Kominars, &McIntosh, 2000). Koplik and de Vito (1986) compared freshman from 1976 with freshman from 1986 and, based on student report, found increased distress in the latter cohort. However, this study defined distress based on issues such as lack of sleep and lack of knowledge of effective studying. Students were asked to endorse problems they experienced and, later, indicate which problems were "serious." Although this distinction was made, analysis simply considered

any problem a problem, regardless of whether or not the student had noted it was serious. Similarly, Jacob, Rehm, and Nisenson (1975) found increases in client report of personal and social (as opposed to academic) concerns from 1955 to 1970. They measured client problems through client verbal report of presenting concerns at intake, and problems were assigned to categories by blind raters. Though these studies are often cited as support for increased severity, they may be more indicative of a changing college population than clearly demonstrating increased psychological severity. These studies are also a minimum of 20 years old.

Harris and Kranz (1991) concluded severity increased based on a study at a small college counseling center, though only 1 year of data were collected. They looked at presenting concerns of clients and, after evaluating the content, determined their results also supported the trend of increasing severity, despite a lack of comparison to prior years. Another study used the Presenting Problems List to measure both distress (severity) and duration (chronicity) in the following areas: academic concerns, relationship and adjustment issues, depression and romantic relationships, sexual issues, and eating concerns. In comparing client self-report from 1991 to clients from 1997, they found significant increases in severity for academic concerns, relationship and adjustment issues, and depression and romantic relationship issues. Additionally, client reports in all areas increased in chronicity from 1991 to 1997 (Erdur-Baker, Aberson, Barrow, & Draper, 2006). Benton and colleagues (2003) used the Case Descriptor List (CDL) upon termination with each client from 1988 to 2001 to detect changes in client problems. The CDL is a 30 item dichotomous measure of therapist perceptions of broad categories of client problems (e.g., check “yes” for relationship issues, depression, and physical

problems; and check “no” for personality disorders). They divided the 13 year period into three periods to determine change across the three periods and found increases with time in 14 of the 19 problem areas. They concluded that students in more recent years presented with more severe problems, due to increased percentages of anxiety, depression, suicidal ideation, sexual assault, and personality disorders. Specifically, the number of clients with depression doubled, and suicidal ideation tripled during the middle of the time period and subsequently declined (Benton et al., 2003). However, this study was limited by the measurement of severity as a dichotomous (rather than continuous) variable and reliance on the subjective opinion of the treating therapist (Kettmann et al., 2007).

In contrast, several studies did not support the notion that severity is increasing over time. Untch (1997) randomly selected client intake reports from 6 academic years (every third year) between 1979 and 1995. He used the Global Assessment of Functioning (GAF), a therapist assessment of functioning based on guidelines articulated in the Diagnostic and Statistical Manual for Mental Disorders (DSM), to measure severity. In a study over 6 years, Pledge et al. (1998) used client report information from the Computerized Assessment System for Psychotherapy Evaluation and Research (CASPER), which measures seven problem areas (chemical, interpersonal, mood, physical, suicide, thoughts, and global). Although they found clients reported a high level of severity throughout these years (consistent presence of suicidality, substance use, history of psychiatric treatment or hospitalization, depression, anxiety, and high subjective ratings of distress), there were no significant increases over time in any of the seven areas. Another longitudinal study, which relied on client report via the Brief

Symptom Inventory, also did not find an overall increase in levels of distress. However, they did find significant changes in distress for certain subsets of clients: African American males showed small but significant increases in distress, whereas Hispanic males showed small decreases. Additionally, they noted that, although the *severity* of some symptoms rose, others declined, and the increase in severity was comparably offset by a reduction in the *number* of symptoms (Gitlin & McGuff, 1996). Across a period of 12 years (1993 to 2005), Hoeppner and colleagues (2009) analyzed an archival database of client ratings obtained during intakes, which included a 24-item symptom checklist, a single-item scale of hopelessness, and a single-item scale of suicidal ideation. They found no significant changes in client symptomology over time, and hopelessness also remained stable. However, they did find a small trend indicating a decrease in "advanced" suicidal ideation (those who endorsed "I would like to kill myself" or "If I had the chance, I would kill myself") over time (Hoeppner, Hoeppner, & Campbell, 2009). Kettmann et al. (2007) conducted a study that relied upon both client and therapist reports of severity. Prior to the initial interview, they measured client distress via the OQ-45. Following the initial interview, the clinician assessed and recorded Diagnostic and Statistical Manual of Mental Disorders (DSM) diagnoses, Global Assessment of Functioning, and qualitative information about history and presenting concerns. To indicate level of severity, researchers assigned ratings to various diagnostic categories based on criteria such as perceived chronicity, interference with functioning, and amenability to treatment. The researchers independently rated each diagnosis; later, consensus was established among the seven raters, and severity level was applied to each corresponding client diagnosis. There were no significant increases in client severity from 1999 to 2005 (Kettmann et al.,

2007).

In sum, some findings indicate that severity is increasing (Benton et al., 2003; Cornish et al., 2000; Erdur-Baker et al., 2006; Harris & Kranz, 1991; Koplik & de Vito,1986; Jacob et al., 1975), while others do not (Gitlin and McGuff, 1996; Hoeppner, Hoeppner, & Campbell, 2009; Kettmann et al., 2007; Pledge et al., 1998; Untch, 1997). Studies that used multiple measures that included direct assessment of client symptoms did not tend to detect significant increases in severity.

Conflicting results may also be due to inconsistency in the definition of terms such as severity (Sharkin, 2004b). It is possible that, rather than clients presenting with higher severity, their presentations are more complex. For example, clients could present with multiple diagnoses, which does not necessarily indicate increased severity (Kettmann et al., 2007). It is possible that studies that involved dichotomous measures concluded severity increased based on the presence of more problems, rather than more severe problems. A small increase in the number of complex cases may cause clinicians to feel more overwhelmed, when in reality it only applies to a small number of clients. Also, it is possible that clinicians are more reactive and concerned about clients with severe presentations due to highly publicized campus tragedies (Watkins, Hunt, & Eisenberg, 2011). In the Benton et al. (2003) study, a diagnostic category was considered severe if most counseling center staff deemed it severe. On the other hand, Sharkin (2004b) recommended that certain problems should be excluded from being labeled severe, due to their commonality among college students. Rather, severe pathology should be defined as problems that interfere with students' ability to function in college and are outside the realm of problems counseling centers are designed to serve. Though

definitions of severity vary, for the purposes of this study, I have defined increased severity as a statistically significant increase in overall distress levels as measured by client report of various symptoms.

There are a variety of alternative explanations for inconclusive results regarding increasing severity of clients in UCCs. For example, the studies conducted vary in length, and it is possible that those spanning 6 to 8 years did not find increasing severity due to inadequate length of time to detect change (Hoeppner et al., 2009). Sharkin (2004b) suggests that studies incorporate an objective, repeated outcome measure, such as the OQ-45, on a large sample over several years.

In sum, the literature regarding increasing severity is inconclusive, and differences may be the result of variability in measures, sample size, raters, length of time, and definitions of severity. It is possible that, although overall distress levels are not increasing, the complexity and clinical demands of cases may be increasing in a manner that is not reflected in particular measures and designs. In response to the ambiguity related to measures, I will use a traditional measure as well as additional measures of severity related to mental health history. Another possibility is that there exists a small subset of clients with very high severity that skew the perceptions of severity, even though the subset is not large enough to impact an increase in the overall trend of severity. Or, it is possible that the increased utilization of services combined with a loss of staff positions may cause the perception of increased severity, when it could simply be a heavier caseload of clients with the same level of severity as in prior years (Kettmann et al., 2007). One way to further explore this discrepancy may be to look at how clients are utilizing services. UCCs tend to operate under a brief therapy model. However, if some

clients utilize a vast amount of resources, this may contribute to UCC directors' perceived increase of client severity as serving these clients taxes staff and decreases the availability of services to other students.

Patterns of Utilization in UCCs

University counseling centers have a responsibility to respond to the current mental health needs of students. To better understand the process of care at university counseling centers, it is necessary to understand how services are utilized by clients. I will first introduce the general area of utilization of health care services with examples from the medical literature. Next, I will explore the literature on the utilization of mental health services, including what is known about utilization at UCCs. I will conclude with a discussion of predictors of high utilization.

Utilization of health care in the United States

For a variety of medical illnesses, only a small percentage of those suffering receive adequate treatment. Studies have shown this trend in several illnesses, such as osteoporosis (Johnell & Fastbom, 2009) and Chronic Obstructive Pulmonary Disease (Make, Dutro, Paulose-Ram, Marton, & Mapel, 2012). Despite this, the cost of health care per capita in the United States is the highest among all countries (Sauter, 2012) and continues to grow. Health economists have argued that a relatively small percentage of the U.S. population is driving this increase. The utilization of health care services is highly skewed such that a relatively small percentage of patients utilize a disproportionately large amount of health care. Specifically, 80% of health care

expenditures come from 20% of the population (Conwell & Cohen, 2005).

In health care, this skewed pattern appears to be consistent over the past few decades. Berk and Monheit (2001) found health care spending estimates in 1987 and 1996 were similarly skewed. After adjusting for inflation, they estimated that 1% of the U.S. population accounted for 28% of health care spending in 1987 and 27% of expenditures in 1996. In both years, they found the top 5% of patients accounted for more than half of expenditures. The top 10% of patients used more than two-thirds of the total health care resources (Berk & Monheit, 2001). This trend is also present among beneficiaries of Medicare, as the top 5% of beneficiaries accounted for approximately half of fee-for-service Medicare costs (Lieberman, Lee, Anderson, & Crippen, 2003). Since 1970, the lower half of utilizers only accounted for 3% of health care spending. People in the bottom 50% spent an average of $122 per year in medical costs, whereas people in the top 1% incurred annual costs of $54,459 (Berk & Monheit, 2001).

Riley (2007) analyzed trends in Medicare spending over 30 years and found that high costs at the person level were consistent from year to year, which indicates the people who incur high health care costs tend to maintain a similarly high level of costs for multiple years. For whatever reason, these health care recipients do not recover quickly (or are simply not discontinuing a high level of use of health care services). As a result, they continue to contribute to the high health care costs year after year. This provides support for gearing cost-saving strategies towards chronic illness.

Although the general medical literature suggests that a small percentage of the population has consumed most health care services over the past several decades, it is unclear whether this exists in the treatment of mental health generally or at UCCs. Below,

I utilize the approach outlined in the above health care reports as a framework to examine utilization of mental health services and UCCs specifically. By looking at the trends of utilization, it may be possible to better anticipate the needs of future students.

Utilization of mental health services

Mental health services represent a significant portion of the health care sector. In 2006, more than 36 million Americans paid for mental health services, for a total cost of $57.5 billion and an average expenditure of $1,591 per person (Agency for Health care Research and Quality, 2012). The National Institute of Mental Health estimates both direct and indirect costs (i.e., lost earnings, public expenditures for disability) associated with mental illness to exceed $300 billion annually. Despite these costs, many diagnosed with mental disorders remain untreated (Wang, Lane, Olfson, Pincus, Wells, & Kessler, 2012). Lack of treatment for mental health issues comes at a high cost: low quality of life, decreased productivity, potential harm to self or others, and, in some cases, death (Kessler et al., 1999; Parks, Svendsen, Singer, & Foti, 2006). Although there are many barriers to effective treatment, a better understanding of how mental health care is utilized may yield insight into treating more people efficiently and effectively. In this section, I will discuss trends in the utilization of mental health services generally and conclude with a specific focus and review of statistics related to utilization at university counseling centers.

Although the general health care literature has focused directly on costs and the small percentage of the patients who received a large amount of services, health services research in mental health has focused more on the problem of under-treatment. More than

one-quarter of the U.S. population suffers from mental illness in any given year (Kessler, Chiu, Demler, & Walters, 2005). However, only half of those who meet criteria for a diagnosable mental disorder received any treatment, and only 13% received minimally adequate treatment (National Institute of Mental Health, 2012). Similarly, within a 12 month period, of people diagnosed with mental disorders, only 16% were treated by a mental health professional, 12% were treated by a psychiatrist, and 22% were treated by a general medical provider (Wang et al., 2012). Generally, those who received treatment from mental health providers attended four times more visits than those who received treatment from medical providers (Wang et al., 2012). In a population of patients with private insurance who were also diagnosed with a mental health disorder, only 32.4% received psychotherapy. However, certain diagnoses had higher percentages who sought psychotherapy, including posttraumatic stress disorder, major depressive disorder, and bipolar disorder (75%, 62%, and 54%, respectively). Those who attended more sessions of psychotherapy tended to be patients with diagnoses of posttraumatic stress disorder, alcohol use, and mild depression, while patients diagnosed with schizophrenia, bipolar disorder, and major depressive disorder tended to attend fewer sessions (Harpaz-Rotem, Libby, & Rosenheck, 2012). The number of depressed patients who attend four or more counseling sessions in a year is quite low—14% (Young et al., 2001). Hansen, Lambert, and Forman (2002) conducted a study that included 6,000 adult clients from a variety of mental health settings (health maintenance organizations, community mental health, and counseling centers) and found the average number of sessions attended was fewer than five. This pattern of under-treatment provides some indirect evidence that a small portion of patients utilizes most of the available mental health services (i.e., very few potential

clients ever receive treatment). A review of the literature did not reveal a direct examination of the percentage of services consumed by different groups of clients.

Some clients appear to move towards initiating treatment but never attend or drop out quickly (Simon & Ludman, 2010; Zivin et al., 2009). Information regarding who drops out prematurely reveals patterns about those who tend to remain in therapy. In community mental health centers, dropout before the first session varies from 25%-40% (Folkins, Hersch, & Dahlen, 1980; Kruse, Rohland, & Wu, 2002; Orme & Boswell, 1991). Simon and Ludman (2010) studied early dropout from psychotherapy in insured people with depression. They found that, in the 90 days following an initial screening call, 22% never attended the first visit, 21% came to one visit, 15% attended two visits, 12% attended three visits, 9% completed four visits, and 21% followed through with five or more visits. Those who dropped out before the first visit tended to be female, younger in age, and have less severe symptoms of depression (all of which may be factors present in clients at UCCs). Dropout prior to the second visit was also related to less severe symptomology, as well as less perceived need for therapy.

Utilization of services at university counseling centers. Compared to the mental health literature generally, there is relatively little research on service utilization in UCCs. According to the Association for University and College Counseling Center Directors Annual Survey, 10% of students seek counseling services (Barr, Krylowicz, Reetz, Mistler, & Rando, 2011). Findings of the National Survey of Counseling Center Directors were consistent with this estimate, specifying 10.6% of students received individual or group counseling in 2011 (Gallagher, 2011). This survey also noted that a total 30% of students were seen through workshops, in the classrooms, or through other outreach

opportunities (Gallagher, 2011). According to another study, which relied on interviews of students who experienced suicidal ideation while in college, 44% reported not seeking any treatment during this time. Students attributed a lack of treatment seeking to ambivalence regarding their need for treatment or the effectiveness of treatment, stigma, and financial concerns (Arria et al., 2011).

The amount of services utilized by UCC clients is not clear. Many UCCs report they utilize a brief therapy model with the goal of limiting the number of clients who utilize a high percentage of services, thus serving a greater number of students (Barr et al., 2011; Gallagher, 2011). However, the impact of or adherence to such limits is not clear. In addition, each center sets the parameters for their own session limits, the most common being 12, 10, and 8 sessions, respectively (Barr et al., 2011). While 77% of center directors state that they operate within session limits, the other 23% reported a philosophy of seeing clients as long as necessary, while making outside referrals when advisable (Gallagher, 2011). However, the validity of the survey data reported above cannot be determined. Estimates were derived from the report of UCC directors, and the type of data directors used to complete the survey, if any, is unclear (i.e., estimates could be based on director impressions rather than actual utilization counts). It could be that directors state they are flexible with respect to session limits but have actually made important changes to their centers' process of care, while others who claim adherence to session limits have little influence on the behavior of clinicians and patients.

There do not appear to be any primary studies of how clients utilize UCC services. However, there are several estimates of utilization that can be obtained from studies on the effectiveness of UCC services. Across several studies, the mean number of

sessions attended by a UCC client is approximately 5-7 (Snell et al., 2001; Stone, Vespia, & Kanz, 2000; Minami et al., 2009). However, there is significant variability about this mean. In one study, 20% of clients who completed follow-up surveys only attended the intake session. Of those who attended sessions after intake, 18% completed one additional session, 49% attended between 2-7 sessions, 20% attended 8-12 sessions, and 14% attended more than 12 sessions (Snell et al., 2001). However, this breakdown of utilization is limited to the 43% of clients who returned the surveys. In a more recent outcome study, nearly 40% of clients attended only a single session (Minami et al., 2009). In a similar study of ethnic minority clients using 5 years of archival data, the median number of sessions attended was 3, but the mode was 1. Similar to Minami et al., approximately 40% of clients attended only the intake session and then discontinued therapy. Additionally, half of the clients attended fewer than four sessions, but the maximum number of sessions was 133 (Davidson, Yalushka, & Sanford-Martens, 2004). Although estimates state only one-tenth of college students are seeking treatment and the mode session attendance is 1, UCCs are experiencing long wait lists. One possibility is this may be explained by a skewed distribution of utilization of services.

Predictors of utilization

Similar to the general mental health literature, predictors of utilization in UCCs are not well understood. One factor that may be indicative of attendance is severity. I will discuss what is known regarding severity and mental health utilization, and, more specifically, the relationship between severity and utilization of services at UCCs.

Mental health utilization and severity. In the larger health care literature,

several factors appear to predict membership in the high utilization groups. One study, which analyzed the top 1% of health care utilizers, found that 46% were elderly. Almost half of the top users considered themselves to be in fair or poor health. This suggests both the elderly and those who are in fair or poor health are overrepresented in this population compared to the population at large. However, it also indicates 54% of the top 1% are relatively young and consider themselves in good health (Berk & Monheit, 2001). It is possible that these patients are using treatments because they have insurance and can afford to do so—regardless of their current medical situation or need, as patients without insurance tend to spend substantially less than the insured. One hypothesis regarding the source of the utilization problem suggests that medical care is overused due to a lack of incentive to efficiently use the system (Berk, Monheit, & Hagan, 1988). Doctors may recommend precautionary services, such as CT scans or x-rays, just to ensure absence of a problem, given that insurance tends to cover the bulk of the service. If insured patients paid more out-of-pocket expenses, they might be more reticent to follow through with unnecessary precautionary services. Similarly, physicians may be less likely to recommend at times unnecessary procedures due to the financial hardship they may cause the patient. The health care literature also indicates the very ill consistently utilize a high level of health care services for many years (Riley, 2007). A similar pattern may exist in mental health—where the healthy continue services due to accessibility and knowledge of available resources. This process could drive utilization at UCCs, as most universities provide extremely affordable mental health treatment for students, and students from higher socioeconomic backgrounds may be more likely to know about and take advantage of mental health services.

Although little is known regarding the composition of top users of mental health, some research has been conducted on the relationship between severity and utilization. In one study, prior mental health treatment, family support, and recent alcohol use were positive predictors of mental health attendance at a university-based managed mental health care organization. On the other hand, people were less likely to attend treatment if the following factors were present: legal problems, past suicide attempts, and recent use of medical services. Yet, severity of depression (as measured by the Patient Health Questionnaire-99) was not related to attendance (Zivin et al., 2009). In contrast, another study demonstrated clients were more likely to use mental health services when they scored higher on the General Health Questionnaire, which indicated a higher likelihood of a psychiatric disorder (Simon, VonKorff & Durham, 1994). Yet, utilization decreased with increased out-of-pocket expenses. Additionally, Boswell et al. (2012) found clients with a history of previous counseling were more likely to remain above a clinical cut score of depression after treatment than clients with no previous history of counseling.

Severity of illness in relation to utilization of services at UCCs. A thorough review of the literature failed to identify any published studies on the relationship between severity and utilization in UCCs. Determining the association of client characteristics with utilization may be particularly timely for UCCs due to the perceived increase in severity of clients and the report of increasing demands on UCC therapists. While 94% of counseling centers maintain the right to refuse treatment to students presenting with concerns beyond their capability, nearly half of directors indicate they would not deny service to such students if they refused an outside referral (Gallagher, 2011). Due to the perceived increase in severity of client issues, it is possible that UCC

clinicians are spending a disproportionate amount of time treating more severe clients. If this is the case, there are implications for the time-limited clinical model that is typical of UCCs. It is possible that counseling centers are devoting an increased number of resources to the treatment of chronic mental health issues, a role not consistent with the mission of many UCCs. This shift may impact a UCC's ability to provide services such as prevention and outreach to the student body as a whole. Currently, there is some tension between the traditional mission of UCCs and increased pressure and need to serve students with severe mental health concerns, which may impact the safety of the community. There seems to be a clear need for increased services and increased funding for preventative and crisis services (AUCCCD, 2012). However, there is not currently any literature addressing the distribution of services and resources in UCCs and their relationship to specific client factors. One way to increase awareness of these issues is to examine client utilization of mental health services at UCCs.

Research Questions and Rationale

In health care, a small percentage of the top spenders account for a large portion of health care utilization and costs. Accordingly researchers have argued that the most impactful changes in health care policy should reflect a focus on top spenders. Berk and Monheit (2001) claim that costs are most likely to decrease if efforts are focused on those who are "very ill" rather than making changes that affect a small portion of the care provided—albeit by a larger proportion of the population. A similar strategy may be beneficial in regards to the utilization of mental health care at UCCs, but little is known regarding utilization patterns in this setting. Many UCCs are responding to the call for

accountability by collecting data in this area, though it has not yet been a focus in the literature. Accordingly, it is important to know how students who access UCC services are utilizing those services. For example, does the typical client receive 1 session or 10 sessions, and how many students receive large numbers of services (i.e., "heavy utilizers") such that they represent a significant resource allocation for the UCC. This information may help guide UCCs in treatment planning, disposition of clients, screening procedures, and in making other relevant decisions regarding their model of service delivery. A greater understanding of how clients utilize UCCs might also increase the availability of services for those who are undertreated and more efficiently treat those who may be over utilizing resources. Looking at distribution of services in terms of number of sessions and linking it to specific factors, such as severity, may allow for more foresight in treatment planning with clients, resulting in more effective and efficient treatment.

Changes in utilization may also explain the perception that the severity of UCC clients is increasing. Specifically, if students are using more services than in previous years, or if a small number of students are using a larger percentage of services, the staff of UCCs may experience increased demand or spend a significant portion of their caseload working with clients who have chronic problems.

I propose four specific research questions.

1. First, has the severity of clients at a UCC increased over the last 14 years, as evidenced by increases in client-reported distress?
2. Second, what is the distribution of utilization among UCC clients? Specifically, is the distribution skewed similarly to health care such that a small percentage of

users account for a large percentage of service usage?

3. Third, has the percentage of services utilized by the top 1, 5, 10, or 20% of utilizers grown from 1999 to 2011?
4. Finally, does initial severity (as evidenced by increases in client-reported distress as noted in question 1) of client concerns predict utilization? What other predictors are there of client utilization?

To address these questions, I will obtain an archival data set from a UCC that includes utilization data (i.e., session counts) for each client and an assessment of psychological distress at every treatment encounter (OQ-45). Based on the review of the literature, I have several predictions.

1. First, I predict OQ-45 scores at intake will not have increased significantly over time (Hypothesis 1).
2. Second, I predict that the distribution of services in the UCC will parallel the skewed distribution found in the health care literature, such that small percentage of clients will account for a large percentage of the services provided by the UCC (Hypothesis 2; Conover, 2011).
3. Additionally, I expect that the amount of services utilized by this group will have shifted over the past 14 years such that this small percentage of student clients utilizes a larger percent of services (Hypothesis 3).
4. Lastly, I expect initial severity will predict utilization, such that those indicating initially higher distress will utilize more services than those indicating lower initial severity. More specifically, I predict ratings of psychological distress will

be higher among the group of high utilizing clients, which may explain the common perception that the severity of UCC clients is increasing (Hypothesis 4).

CHAPTER II

METHOD

Participants

Demographic information was collected by the UCC prior to each intake session. In recent years, the UCC has used the Center for Collegiate Mental Health (CCMH) standardized data form for this information, which is stored in an electronic database. For clients who had more than one intake, demographic information from the most recent intake was used. The total sample included 8,623 clients. The mean age of clients was 25.34 years (SD = 6.94; median = 24; mode = 19; range = 17-65; 5,064 were missing data; 59%). This included all students, faculty, and staff clients with at least one contact at the UCC between July 1, 1999, and December 31, 2011. Of these, 58% (*n* = 4,411) of clients reported being female, 41% (n = 3137) reported being male, and less than 1% (*n* = 12) reported being transgender (data on gender for 1,046 were missing; 12%). Regarding relationship status, 52% (*n* = 3,905) reported being single; 30% (*n* = 2,221) married or partnered; 10% (n = 780) in a serious dating or committed relationship; 4% (*n* = 284) divorced; 2% (*n* = 150) separated; 1% (*n* = 41) civil union, domestic partnership, or equivalent; 0% (*n* = 3) widowed; and 1% (*n* = 68) other (1,171 were missing data; 14%). Of those providing racial/ethnic identity, reported identifications were: 1.5% (*n* = 107) African American/Black; 0.3% (*n* = 23) American Indian or Alaskan Native; 0.2% (*n* =

17) Native American, Native Hawaiian, or Pacific Islander; 4.9% (*n* = 356) Asian American/Asian; 79.2% (*n* = 5789) Caucasian/White; 4.2% (*n* = 398) Hispanic/Latino/a; 3.4% (*n* = 246) Multiracial; 4.1% (*n* = 301) Other; 1.0% (*n* = 76) Prefer not to answer (1,310 were missing data; 15%).

Information about sexual orientation has not been reliably collected throughout the database time period and is missing for a significant portion of the sample (3,644 missing, mostly for appointments prior to 2004-2005). Of the 4,979 clients (58%) who reported sexual orientation, 87% (*n* = 4,348) indicated heterosexual, 4% (*n* = 183) gay, 3% (*n* = 172) bisexual, 2% (*n* = 76) questioning, 1% (*n* = 57) lesbian, and 3% (*n* = 138) prefer not to answer.

At intake, questions are asked about clients' presenting concerns and these are published in the annual surveys. The most recent annual survey at the counseling center (2012-2013) indicated anxiety was the most frequent presenting concern endorsed (63%), followed by depression (58%), stress (56%), academics (44%) and self-esteem (40%; University of Utah, 2013). Additionally, more than one-fifth of all clients indicated difficulty in the following areas: loneliness (32%), relationship with partner (32%), social anxiety (24%), relationship with friends (22%), family of origin (21%), and career (20%).

Setting

I used a de-identified archival database from a UCC at a large public university in Utah for this study. The UCC provides direct clinical services, outreach, and consultation to students and faculty. Part-time psychiatrists and psychiatry residents are available for psychopharmacology services. Additionally, the UCC focuses on training master's and

doctoral students in psychology and social work in the areas of group and individual counseling, outreach, assessment, and consultation. The majority of clients are students, who pay a standard fee of $10 to $12 per individual session and $5 for each group session. Faculty and staff are charged according to a sliding scale determined by income. Intake and crisis sessions are free of charge. If a client is unable to afford the fees, a fee reduction can be arranged. Individual counseling is the primary modality, but group counseling, couples counseling, and psychiatry services are also available. There is a session limit of 12 individual sessions annually, though there is flexibility to extend the limit when necessary (and there has been some variability in the session limit policy over time). No limit exists for group sessions.

Procedure

Data collection process at UCC

This study used archival data from the counseling center's records collected between July 1, 1999 and December 31, 2011. The data collection procedures at this UCC have been described in previous publications (Minami et al., 2009). All appointments are tracked through Titanium Scheduling software, an electronic scheduling software that tracks appointments (including appointment type, date, whether or not it was attended, etc.) by client. Per standard practice at this center, all clients completed the OQ-45 (a client-report instrument designed to measure change in client levels of distress over time; Lambert et al., 2004) prior to the intake session and each subsequent individual, couples, or group counseling session. Typically, the OQ-45 takes clients approximately 5 minutes to complete. In recent years, clients also completed the

Counseling Center Assessment of Psychological Symptoms-34 (CCAPS-34; another client-report instrument measuring distress of college students in various areas) prior to each session. As is current practice at the UCC, results of both instruments are available to the therapist prior to meeting with the client. Before the intake session, clients are also required to fill out the Center for Collegiate Mental Health (CCMH) standardized data set, which includes demographic and mental health questions and the Counseling Center Assessment of Psychological Symptoms-62 (CCAPS-62). All information collected from the intake and subsequent appointments are stored electronically in the Titanium Scheduling software, while the results of the OQ-45 are stored in the OQ Analyst program for both clinical and program evaluation purposes.

Measures

Severity

Client-reported severity was assessed using the Outcome Questionnaire-45 (OQ-45) collected at the intake session of each client's first episode of treatment. The OQ-45 is intended to measure change in client report of distress (e.g. "I feel worthless"; "I have frequent arguments"; "I have difficulty concentrating") over time in therapy (Lambert et al., 2004). Clients are instructed to respond to the items regarding how they felt over the past week. It contains 45 items scored on a 5-point Likert-type scale that ranges from 0 (never) to 4 (almost always). All items are weighted equally (with some items reverse-scored) in calculating an overall score, with higher scores indicating higher levels of reported distress. A score of 63 or higher is considered clinically significant distress. The OQ-45 also consists of three subscales: symptom distress, interpersonal relations, and

social role performance. There is some support for the subscales based on factor analysis and convergent validity results. However, the total score has the strongest psychometric support, demonstrating internal consistency, test-retest reliability, and sensitivity to change in therapy (Lambert et al, 2004). This measure is correlated with a variety of established measures, such as the SCL-90, Beck Depression Inventory, Taylor Manifest Anxiety Scale, Inventory of Interpersonal Problems, Social Adjustment Scale, and Zung Depression and Anxiety Scales (Lambert et al., 1996; Umphress, Lambert, Smart, Barlow, & Clouse, 1997).

While the OQ-45 was the primary measure used, I also explored other measures of severity, selected to represent specific factors related to current thoughts and feelings as well as mental health history. These included: (a) specific items on the OQ-45 ("I have thoughts of ending my life," "I feel hopeless about the future," "Disturbing thoughts come into my mind that I cannot get rid of," "I feel that something bad is going to happen," "I feel something is wrong with my mind," "I feel angry enough at work/school to do something I might regret"); (b) prior hospitalizations; (c) prior suicide attempts; (d) prior counseling; (e) having a family member diagnosed with a mental disorder; and (f) use of psychotropic medication.

Utilization: Session count and episodes

The unit of analysis for utilization was a visit as recorded in the UCC database. I determined the number of sessions attended by each client by extracting the number of recorded clinical encounters recorded in the Titanium Scheduling software archive and Protégé program data. Each appointment was coded by date and type of appointment.

This included the following appointment types: biofeedback sessions (0%, *n* = 7), biofeedback training/orientation (0%, *n* = 47), career counseling (0%, *n* = 76), couples counseling (5%, *n* = 3,833), crisis intervention (2%, *n* = 1,696), extended intake (0%, *n* = 380), group counseling (13%, *n* = 10,536), individual counseling (59%, *n* = 49,309), advanced intake (9%, *n* = 7,916), couples counseling intake (0%, *n* = 388), same day intake (0%, *n* = 368), medication management (8%, *n* = 6,457), pregroup screening (1%, *n* = 803), psychiatric evaluation (1%, *n* = 1,244), substance abuse assessment (0%, *n* = 70), testing administration (1%, *n* = 582), and testing feedback (0%, *n* = 191).

I conducted two tests of utilization, first on the total sample of sessions (i.e., all sessions utilized by a client throughout the entire study period) and also restricted to utilization during a client's initial episode of care at the UCC. A clinical episode was defined as sessions attended until the client did not return to the center for over 90 days (see Minami et al., 2009). If the client returned to the center following a 90-day gap, for episode analyses, I included only the first episode. In the total analyses, I included all session attendance, regardless of episode.

I identified clients who were high utilizers of services by selecting session count cut points based on the overall distribution of utilization (overall, within first episode, and within year). Cut points corresponded to clients who had utilization counts in the top 1, 5, 10, and 20%. See Table 1 for counts corresponding to each cut point.

Statistical Analysis

Given the relatively limited amount of information available on the utilization of clinical services at UCCs, my first set of analyses was exploratory and descriptive. I

Table 1

Session Count Cut Points

	Cut points (# of sessions)			
	Top 1%	Top 5%	Top 10%	Top 20%
Total Utilization	74	36	24	14
First Episode Utilization	54	24	17	10
1999-2000	38	24	17	10
2000-2001	45	22	15	10
2001-2002	41	25	18	11
2002-2003	48	25	17	11
2003-2004	33	21	15	10
2004-2005	40	23	17	11
2005-2006	35	24	18	11
2006-2007	38	24	17	11
2007-2008	38	22	16	11
2008-2009	31	18	14	10
2009-2010	40	24	18	11
2010-2011	40	22	17	11

examined the distribution of UCC client utilization, including estimates of central tendency (mean, median, and mode), and dispersion (range, standard deviation) for the number of sessions clients utilized within an academic year, in their first treatment episode, as well as across their entire record (utilization across all episodes and academic years). This set of analyses provided a foundation for subsequent analyses that tested specific hypotheses.

Hypothesis 1

To test the hypothesis that OQ-45 scores at intake would not have increased significantly over time, I conducted a regression analysis of the relationship between initial OQ-45 score at intake (or first available OQ-45 score in the first fiscal year) and academic year, where OQ-45 scores were the dependent variable and year was the predictor variable. The OQ-45 intake score was derived from the initial episode for a patient in a given academic year (e.g., if a client presented for two intakes in an academic year, the second intake OQ-45 score was not included as a predictor). I examined initial OQ-45 as a predictor of utilization within the episode and during the entire academic year.

Hypothesis 2

I examined the hypothesis that utilization would be skewed such that a small percentage of clients would account for a large portion of services utilized in several ways. First, I examined a frequency distribution of utilization that breaks down utilization by percentage of total utilization. I examined utilization by clients in two

ways, (a) as an "episode," wherein an episode stops when there is a 90-day gap between sessions (Minami et al., 2009), and (b) by the total number of sessions each client used during the 12 year time period, regardless of the time between sessions. Second, I determined the proportion of total visits accounted for by the top 5, 10, and 20% of utilizers (High Utilizers; HU) and then compared the average number of visits used by the HU group to the remaining clients (Low Utilizers; LU). I then conducted a test of difference in proportions between the LU and HU group (i.e., the McNemar test of paired proportions; Yatani, n.d.). I expected the proportion of total services utilized by the HU group to be large as compared to the LU group.

Hypothesis 3

I tested the hypothesis that the amount of services utilized by the high utilizer group would have increased over the past 12 years via linear regression. As the outcome is a proportion (the proportion of total services HU group used in each year), I utilized a beta regression to test change in the amount of services utilized by the HU group. The unit of change was fiscal year (July 1- June 30). As suggested by Cribari-Neto and Zeileis (2010), a beta regression is useful when the outcome variable is continuous and assumes values within the interval 0 to 1. I expected that the proportion of total sessions in the HU group would increase over time.

Hypothesis 4

To test the hypothesis that initial severity would predict utilization, I used a Poisson regression, as utilization is a count variable (i.e., number of sessions; Atkins &

Gallop, 2007). First, I determined if initial severity, as measured by the OQ-45 score at intake, predicted first episode utilization (as defined above—until the client does not use any services for 90 days). Then, I also determined if initial severity predicted total utilization across all episodes and academic years. I expected increased initial severity would predict higher utilization, such that those indicating initially higher distress utilized more services than those indicating lower initial severity.

CHAPTER III

RESULTS

Utilization Descriptive Statistics

Between July 1, 1999, and December 31, 2011, a total of 8,623 clients attended a total of 83,095 sessions. The average number of episodes per client is 1.36 (SD = 0.82; median = 1; mode = 1; range = 1-12) episodes with the average length of episode of 7.37 sessions (SD = 11.67; median = 4; mode = 1; range = 1-254). Across all episodes (i.e., the total utilization of a given client from 1999-2011), the average number of sessions attended per client was 9.72 (SD = 16.17; median = 5; mode = 1; range = 1-413; see Figure 1). As can be seen in Figure 1, the great majority of clients attended only one session and the distribution is highly skewed.

When restricted to each client's first episode, the total number of sessions attended was 60,755. The average length of the first episode was 7.05 sessions (SD = 10.96; median = 4; mode = 1; range = 1-238; see Figure 2).

The distribution of first episode utilization is skewed similarly to the distribution of total utilization (as seen in Figure 1). The great majority of clients attended only one session; however, the mean and range are lower when looking at just the first episode of treatment for all clients.

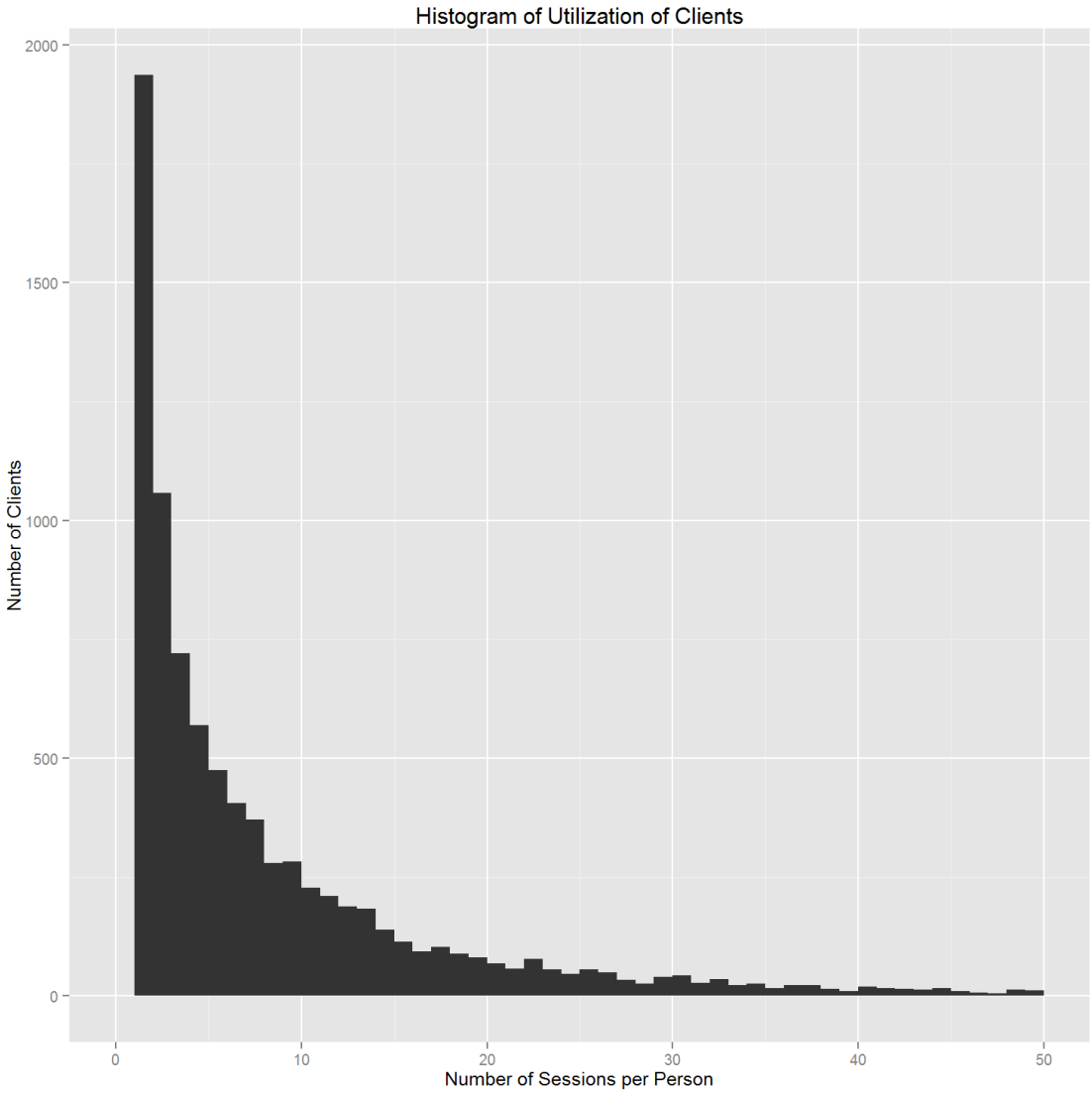

Figure 1. Histogram of utilization of clients. This figure illustrates the distribution of how many clients attended each number of total sessions. The x-axis is the number of total sessions attended per person and the y-axis is the number of clients. Each bar-width is one session. Figure 1 has been cut off at 50 sessions per person (though the actual range extends to 413 sessions) to illustrate the skewdness. (More information about the higher utilizers who used more than 50 sessions, not included in Figure 1, will be discussed in the results.)

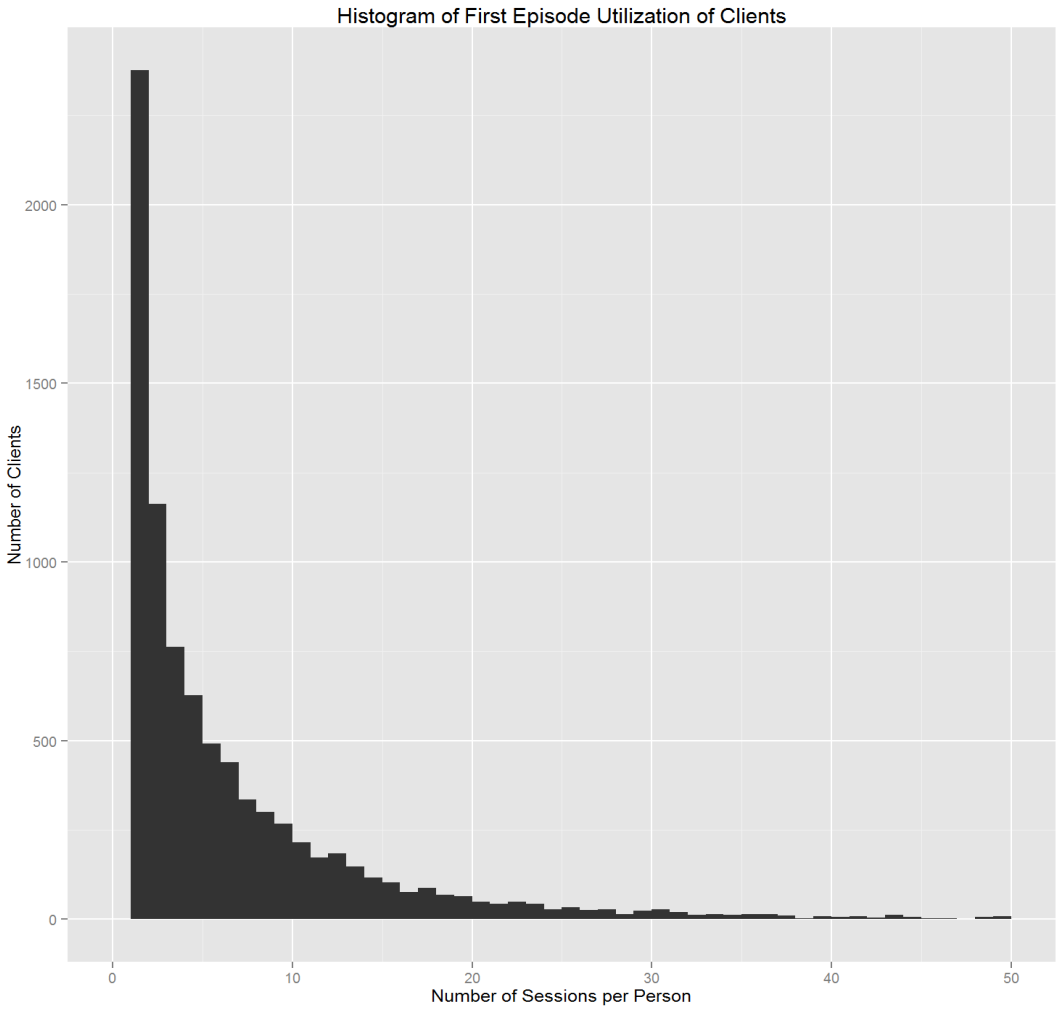

Figure 2. Histogram of first episode utilization of clients. This figure illustrates the distribution of how many clients attended each number of total sessions for their first episode of treatment. First episode is defined as each client's first contact at the counseling center and subsequent sessions attended until the client did not return to the center for over 90 days. The x-axis is the number of total sessions attended in the first episode per person and the y-axis is the number of clients. Each bar-width is one session. Figure 2 has been cut off at 50 sessions per person (though the actual range extends to 238 sessions) to illustrate the skewdness.

The 10 clients who attended the most sessions over the whole period utilized a cumulative total of 2,290 sessions. There was 1 client who attended more than 400 sessions, 5 who attended more than 200 sessions, and 40 who attended at least 100 sessions throughout the time period.

At the first appointment within this time period, the mean OQ-45 score of clients across the entire study time period was 74.05 (SD = 23.52; median = 74; range = 2-157). The total number of sessions utilized by clients has grown steadily from 1999 to 2011 (see Figure 3).

Though there are some decreases from one year to the next, the overall trend is increasing utilization throughout the time period at the UCC.

Table 2 displays the descriptive statistics of overall utilization by year, illustrating that total sessions attended increased during the time period. Although the mean fluctuated some throughout the time period, the median (4) and mode (1) remained consistent.

The total number of crisis appointments attended by all clients increased over time as well (see Figure 4). In 1999-2000, there were 28 crisis appointments. In 2004-2005, there were 145 crisis appointments attended. By the end of the time period, in 2010-2011, clients attended a total of 286 crisis appointments.

Trends in Client Severity Over Time

My initial research question was, “Has the severity of clients at the UCC increased over the last 12 years, as evidenced by increases in client-reported distress?”

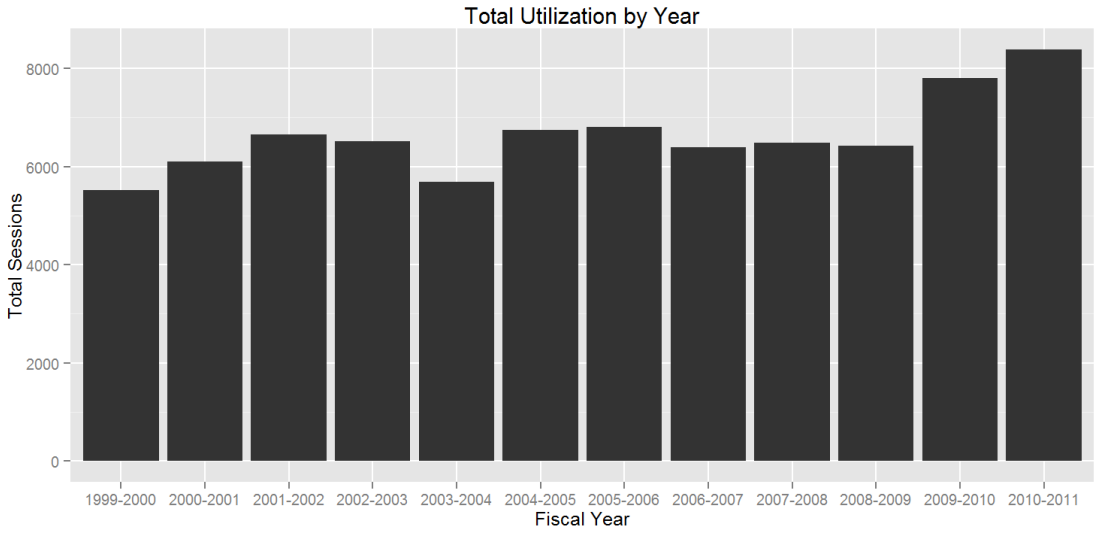

Figure 3. Total utilization by year. This figure illustrates the total number of sessions attended by all clients each year, from the fiscal year 1999-2000 to 2010-2011.

Table 2

Descriptive Statistics of Total Utilization by Year

Year	Total Sessions	Mean	Range	SD
1999-2000	5518	6.62	1-79	8.21
2000-2001	6105	6.53	1-74	8.25
2001-2002	6660	7.14	1-87	8.93
2002-2003	6513	7.17	1-70	9.02
2003-2004	5692	6.55	1-60	7.20
2004-2005	6750	6.84	1-68	8.20
2005-2006	6807	7.14	1-60	7.83
2006-2007	6389	7.01	1-72	8.40
2007-2008	6482	6.64	1-82	7.73
2008-2009	6430	6.03	1-47	6.38
2009-2010	7796	7.35	1-58	8.40
2010-2011	8385	7.07	1-66	8.02

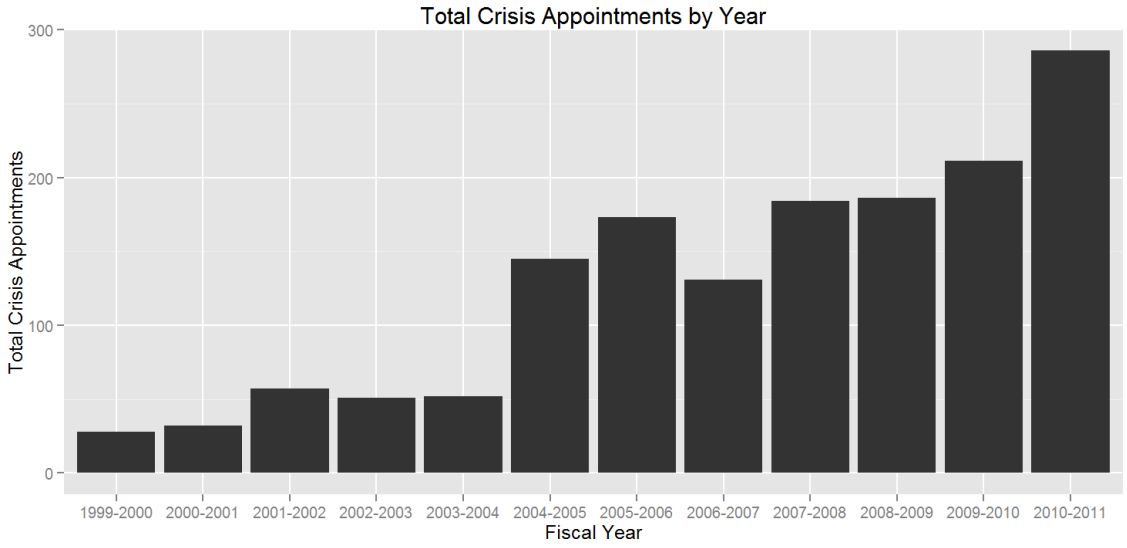

Figure 4. Total crisis appointments by year. This figure illustrates the total number of crisis appointments attended by all clients each year, from the fiscal year 1999-2000 to 2010-2011.

There was evidence of a small increase in client distress as measured by initial total OQ-45 score from 1999 to 2011, $B = 0.22$, $p < .01$ (see Figure 5), which indicates that with each increase in year, OQ-45 total score increased by a predicted 0.22. When comparing means between initial and final years during the time period, Cohen's $d = 0.24$, which is a small effect. Standard deviations ranged from 23.04 to 23.77 throughout the time period.

In 1999-2000, the mean initial OQ-45 score was 71; in 2010-2011, it was 77. The mean tended to increase one year and decrease the next, with an overall increase during the time period. Additionally, there was evidence of changes in specific critical OQ-45 items. There was a small increase over time in frequency ratings of the statement, "I feel something is wrong with my mind" (OQ-45 item 40), $B = .04$, $p < .001$, which means that with a 1 unit increase in year, this item's mean increased by a predicted .04. A comparison of the initial and final year means yielded a Cohen's d of 0.39. In 1999-2000, the average score for this item was 1.6 (midway between responses of rarely and sometimes), whereas in 2010-2011, the mean was 2.1 (sometimes). There was also a small increase in frequency ratings over time for the item, "I feel that something bad is going to happen" (OQ-45 item 33), $B = 0.02$, $p < .001$, which means that with each increase in year, this item increased by a predicted .02. A comparison of initial and final year means yielded a Cohen's d of 0.30. In 1999-2000, the average score for this item was 1.5 (midway between responses of "rarely" and "sometimes"), whereas in 2010-2011, the mean was 1.8 (much closer to "sometimes"). For the item "I feel hopeless about the future" (OQ-45 item 23), $B = 0.02$, $p < .01$, which means that with each increase in year, this item increased by a predicted 0.02. A comparison of initial and final year means yielded an effect size of $d = 0.18$ (see Table 3). In 1999-2000, the average score

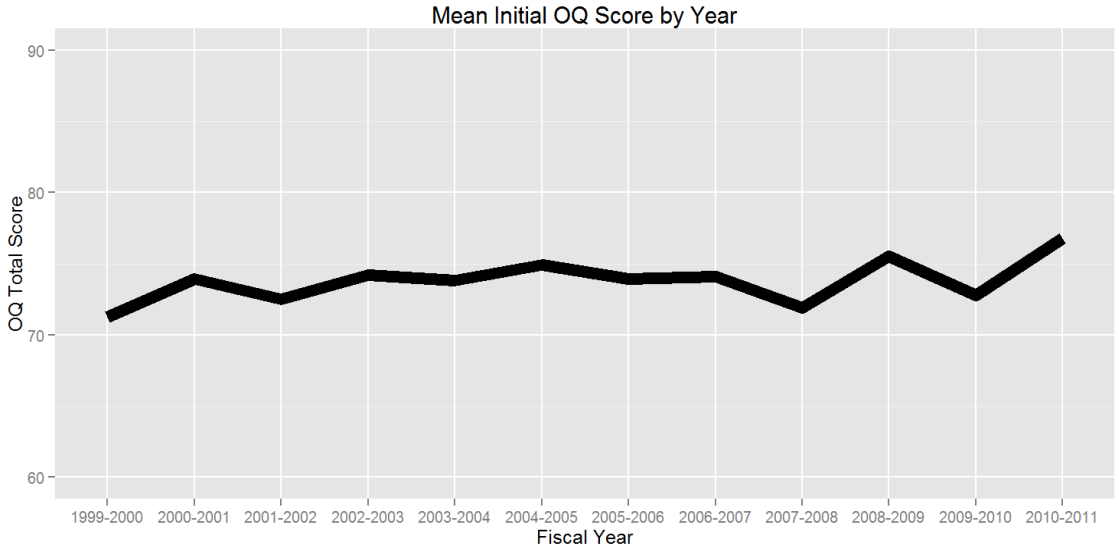

Figure 5. Mean initial OQ-45 score by year. This figure illustrates the average of all initial OQ-45 scores for each year.

Table 3

Significant Increases in OQ-45 Item Means

0=never, 1=rarely, 2=sometimes, 3=frequently, 4=almost always			
Year	I feel hopeless about the future	I feel that something bad is going to happen	I feel something is wrong with my mind
1999-2000	1.77	1.46	1.59
2000-2001	1.78	1.58	1.68
2001-2002	1.74	1.57	1.84
2002-2003	1.87	1.59	1.78
2003-2004	1.73	1.56	1.85
2004-2005	1.81	1.75	1.87
2005-2006	1.87	1.60	1.89
2006-2007	1.84	1.61	1.91
2007-2008	1.81	1.59	1.85
2008-2009	1.96	1.72	2.07
2009-2010	1.96	1.65	1.97
2010-2011	1.97	1.80	2.07

for this item was 1.8 (between responses of rarely and sometimes, but much closer to sometimes), whereas in 2010-2011, the mean was 2.0 (sometimes). There were no significant changes in the frequency ratings of the following items: "I have thoughts of ending my life," "Disturbing thoughts come into my mind that I cannot get rid of," and "I feel angry enough at work/school to do something I might regret." Table 3 includes the OQ-45 items with significant increases.

Additionally, there was an increase in the log odds of previously attending counseling (*LOR* = .08, $p < .001$). While 35% of clients reported previously attending counseling in 1999-2000 ($n = 230$ out of 655 responses), 58% of clients endorsed this in 2010-2011 ($n = 417$ out of 716 responses).

For the remaining variables, only data from 2007-2011 were used for analysis. The response rate for these items prior to this time period was extremely low (less than 13%), as the question was not included on standard paperwork prior to this time period. There was no significant increase in the log odds of clients endorsing prior hospitalization or attempted suicide. However, there was an increase in the log odds of having a family member with a mental disorder (*LOR* = 0.12, $p < .01$). Specifically, in the 2007-2008 fiscal year, 33% (109 out of 326 responses) of clients reported having a family member diagnosed with a mental disorder, and this percentage rose to 42% (268 out of 642 responses) in 2010-2011. There was a slight increase in the log odds of using psychotropic medication (*LOR* = .06, $p < .05$). In 2007-2008, 40% ($n = 123$ out of 310 responses) of clients reported prior or current use of psychotropic medication, and this increased to 45% ($n = 232$ out of 511 responses) of clients in 2010-2011.

Distribution of Utilization

My primary question was, "What is the distribution of utilization among UCC clients? Specifically, is the distribution skewed similarly to reports from general health care utilization such that a small percentage of users account for a large percentage of service usage?"

In the total sample, the distribution of client utilization is skewed such that the top percentiles of utilizers account for a large percentage of service usage (see Figure 6). Specifically, the top 1% (n = 86 clients) of utilizers (defined by selecting clients who attended at least 74 sessions) accounted for 12% of total service utilization across the total study period. The top 5% (attended at least 36 sessions; n = 423) utilized 31% of total sessions, the top 10% (attended at least 24 sessions; n = 843) used 46% of services, and the top 20% (attended at least 14 sessions; n = 1,719) accounted for 64% of the total number of sessions.

The mean number of sessions per person for these groups of utilizers was disproportionately large compared to the overall mean of 10 sessions per person: 115 for the top 1% (used a total of 9,910 sessions out of 83,813 sessions), 62 for the top 5% (26,375 sessions), 46 for the top 10% (38,378 sessions), and 31 for the top 20% (53,931 sessions; see each bar in Figure 6). The 1,719 high utilizers (top 20%) used 53,931 sessions and a mean of 31 sessions, compared to the remaining 6,904 low utilizers (bottom 80%) who used a total of 29,882 sessions and average of 4 sessions per person. The difference between these groups (high and low utilizers) was significant (McNemar's chi-square = 25581.12, $p < .001$). The top 10% of utilizers and remaining 90% of utilizers used roughly the same amount of sessions (38,378 and 45,435, respectively).

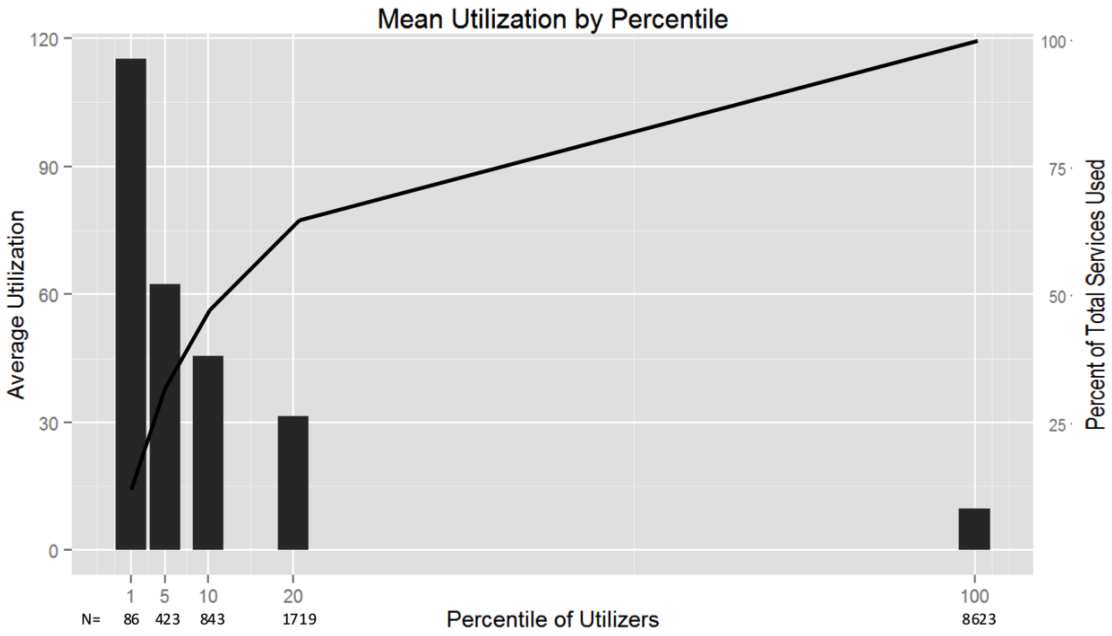

Figure 6. Mean utilization by percentile. This figure illustrates the distribution of client utilization. The bars represent the mean number of sessions used (left y-axis) between 1999-2011 for the top 1, 5, 10, 20 and 100% of clients. Percentiles (x-axis) were ranked by utilization. The line graph represents the percent of total services used (right y-axis) by each of the groups.

When sessions were restricted to the first episode only (clients' first contact at the counseling center and subsequent sessions attended until the client did not return to the center for over 90 days), the distribution of utilization is also skewed such that the top percentiles of utilizers account for a large percentage of service usage. This pattern was generally consistent with the trend of overall utilization (not restricted to first episode). The total number of sessions in the first episode for all clients was 58,513 sessions. The top 1% of utilizers (n = 80) accounted for 11% of service usage, the top 5% (n = 432) utilized 31% of total sessions, the top 10% (n = 832) used 44% of services, and the top 20% (n = 1812) accounted for 65% of the total number of first episode sessions.

The mean number of sessions for these groups of utilizers was disproportionately large compared to the overall mean of 7 sessions per person for first episode: 80 (for the top 1%; total sessions = 6,422), 42 (5%; n = 432; total sessions = 17,950), 31 (10%; n = 832; total sessions = 25,763), and 21 (20%; n = 1812; total sessions = 37,919) sessions per person. For example, the 1,812 first episode high utilizers (top 20%) used 37,919 sessions in the first episode, while the remaining 6,363 low utilizers (bottom 80% of clients) attended only 20,594 (average of 21 sessions vs. average of 3 sessions per person in the respective groups). The difference between these groups (high and low utilizers) was significant (McNemar's chi-square = 18175.06, $p < .001$).

Trends in Service Utilization of High Utilizers from 1999 to 2011

My next research question was, "Has the percentage of services utilized by the top 1, 5, 10, or 20% of utilizers grown from 1999 to 2011?" After conducting a series of beta regressions (see method section hypothesis 3), there were no significant increases in the

percentage of services utilized by the top utilizers by year (see Table 4).

Predictors of Utilization

My final research question was, "Does initial severity of client concerns predict utilization? What other predictors are there of client utilization?" There was evidence that initial severity of client concerns is related to utilization. Specifically, as initial OQ-45 scores increased, so did number of sessions, for total utilization within person across all episodes ($B = 0.004$, $p < .001$) as well as first episode utilization ($B = .004$, $p < .001$). This means that each additional increase in OQ-45 points increased the expected number of sessions by 1.004 times, or 0.4%. This interpretation was calculated from the log transformation of the Poisson probability distribution. There was a similar effect for several other OQ-45 items: as the frequency rating of the response increased (from "never" to "almost always"), the number of sessions attended also increased, for overall utilization and utilization within first episode (see Table 5). For example, for the item, "I have thoughts of ending my life," as responses increased (from "never" to "almost always"), total number of sessions ($B = .08$, $p < .001$) and first episode utilization ($B = .07$, $p < .001$) increased. This means that each additional point on the OQ-45 item Likert scale increased the expected number of sessions by 1.08 times, or 8%.

The results of additional Poisson regressions indicated that other variables were related to utilization as well. In addition to reporting regression coefficients, means were derived using descriptive statistics of aggregating data by each response of the variable to more clearly illustrate differences. Clients who reported having a family member diagnosed with a mental disorder had higher total utilization (10.6 vs. 9.6 sessions; $B =$

Table 4

Percentage of Total Sessions Utilized by High Utilizers by Year

Fiscal Year	Top 20%	Top 10%	Top 5%	Top 1%
1999-2000	62%	40%	26%	8%
2000-2001	61%	42%	27%	9%
2001-2002	62%	41%	26%	8%
2002-2003	61%	42%	27%	8%
2003-2004	59%	39%	24%	7%
2004-2005	59%	41%	25%	7%
2005-2006	59%	37%	22%	6%
2006-2007	61%	41%	25%	7%
2007-2008	58%	38%	23%	7%
2008-2009	56%	36%	22%	7%
2009-2010	60%	38%	24%	7%
2010-2011	59%	40%	26%	7%

Table 5

Results of Poisson Regressions- OQ-45 Items as Predictors of Utilization

	Overall Utilization			First Episode Utilization		
OQ-45 Item	B	*p*	*%*	B	*p*	*%*
I have thoughts of ending my life	0.0811	< .001	8.45%	0.0745	< .001	7.73%
I feel hopeless about the future	0.0788	< .001	8.19%	0.0841	< .001	8.77%
Disturbing thoughts come into my mind that I cannot get rid of	0.0518	< .001	5.32%	0.0512	< .001	5.25%
I feel that something bad is going to happen	0.0546	< .001	5.61%	0.0574	< .001	5.91%
I feel something is wrong with my mind	0.0415	< .001	4.24%	0.0515	< .001	5.29%
I feel angry enough at work/school to do something I might regret	0.0250	< .001	2.53%	0.0166	< .001	1.67%

% = expected % increase in number of sessions with each additional point on the OQ-45 Likert scale

.10, $p < .001$) and higher utilization within the first episode (7.6 vs. 6.8 sessions; $B = .11$, $p < .001$). This means that clients who reported having a family member with a mental disorder had an expected increase in overall session utilization of 10% and 11% for first episode sessions. Clients with a prior suicide attempt also had higher total utilization (13.3 vs. 9.7 sessions; $B = .32$, $p < .001$) and higher utilization within the first episode (8.8 vs. 7.0 sessions; $B = .23$, $p < .001$). This means that clients who had a prior suicide attempt had an expected increase in overall session utilization of 38% and 26% of first episode sessions. Those who had previously attended counseling had higher total utilization (12.2 vs. 7.0 sessions; $B = .56$, $p < .001$) and higher utilization within the first episode (8.2 vs. 5.8 sessions; $B = .35$, $p < .001$). This means that clients with prior counseling had an expected increase in overall session utilization of 75% and 42% of first episode sessions. Clients acknowledging at least one prior hospitalization for mental health concerns had higher total utilization (11.8 vs. 9.8 sessions; $B = .18$, $p < .001$) and slightly higher utilization within the first episode (7.6 vs. 7.1 sessions; $B = .01$, $p < .05$). This means that clients who have been hospitalized had an expected increase in overall session utilization of 20% and 6% of first episode sessions. Clients who had taken psychotropic medication had higher total utilization (12.1 vs. 8.5 sessions; $B = .35$, $p < .001$) and higher utilization within the first episode (8.1 vs. 6.5 sessions; $B = .22$, $p < .001$). This means that clients who had taken psychotropic medication had an expected increase in overall session utilization of 42% and 24% of first episode sessions.

CHAPTER IV

DISCUSSION

In this chapter, I interpret and discuss the results of this study. This chapter is divided into six sections: (a) major findings of the study, (b) interpretation of the results, (c) limitations of the study, (d) clinical implications, (e) recommendations for future research, and (f) conclusion.

The objective of this study was to examine patterns over time related to severity and utilization of mental health services in a university setting. To test the hypotheses of this study, 12 years of archival data from a university counseling center were analyzed.

Major Findings

Depending on which variables were used to measure severity, results were mixed related to whether or not severity of clients at a university counseling center has increased between 1999 and 2011. During this time period, initial total OQ-45scores increased, as did several specific OQ-45items, including: “I feel hopeless about the future,” “I feel that something bad is going to happen,” and “I feel something is wrong with my mind.” However, these increases were typically small (with a few approaching medium, effect sizes between 0.18 and 0.39). Additionally, the proportion of clients indicating they have a family member who has been diagnosed with a mental disorder increased, from 33% in

2007-2008 to 42% in 2010-2011. The proportion of clients reporting current or prior use of psychotropic medication increased as well (45% in 2010-2011 vs. 40% in 2007-2008). Lastly, the proportion of clients indicating they had previously attended counseling before coming to the UCC significantly increased over time—from approximately one-third of clients in 1999-2000 to nearly three-fifths in 2010-2011.

However, other measures of severity did not significantly increase from 1999 to 2011. First, some OQ-45items that indicate a higher level of severity, including "I have thoughts of ending my life," "Disturbing thoughts come into my mind that I cannot get rid of," and "I feel angry enough at work/school to do something I might regret" did not increase during the time period. Some of the responses to mental health history also did not demonstrate significant changes, such as clients reporting prior hospitalizations and prior suicide attempts.

The distribution of utilization of services was similar to that of general health care as cited in the introduction, meaning a small percentage of users account for a large percentage of service usage (i.e., top 20% utilized 64% of services). This trend was consistent for utilization patterns across all episodes as well as within first episode utilization only. When I broke down these percentages of utilization within each year, the percentage of services that these high utilizers accounted for did not grow over time—it was stable.

The final main findings were regarding variables that were related to between person differences in utilization. First, individuals with higher initial OQ-45scores tended to attend more sessions in their first episode of treatment as well as more sessions across episodes. This was also the case for some specific OQ-45items: "I have thoughts

of ending my life," "I feel hopeless about the future," "Disturbing thoughts come into my mind that I cannot get rid of," "I feel that something bad is going to happen," "I feel something is wrong with my mind," and "I feel angry enough at work/school to do something I might regret" (expected sessions attended increased between 2-9% for each additional OQ-45point). Additionally, clients who reported having a family member diagnosed with a mental disorder utilized more sessions in the first episode and overall (10.6 vs. 9.6 sessions). Clients who had previously attended counseling used more sessions, as did clients with a prior suicide attempt (12.2 vs. 7.0 sessions). Clients reporting any prior hospitalizations for mental health concerns utilized more services than those who had not been hospitalized (11.8 vs. 9.8 sessions). Those who reported taking psychotropic medication (past or present) also utilized more sessions (12.1 vs. 8.5 sessions). Lastly, clients with a prior suicide attempt had higher total utilization than clients with no history of suicide attempts (13.3 vs. 9.7 sessions).

Interpretation of Results

Severity

The literature on whether severity of concerns of college students and clients at university counseling centers is increasing is mixed. This is largely due to various ways of defining and measuring severity. The results from the OQ-45total score and selected items offer information based on continuous symptom severity scales rather than dichotomous options from checklist inventories in previous studies or impressions of UCC directors. Observed increases on these severity measures could partially explain perceptions of university counseling center staff that severity is increasing. If clients are

reporting more distress initially, as captured by the OQ, they are likely communicating this (directly and/or indirectly) to their therapists. With time, clients also reported feeling increasingly more hopeless about the future, more frequently felt that something bad would happen, and reported feeling something is wrong with their minds more often. These types of thoughts and feelings suggest a more severe level of distress and psychopathology. Though these increases support the trend of increasing severity, they were small increases. It seems as though they may account for some of the perception of UCC staff that client severity is increasing. However, this does not appear to fully capture the experiences and perceptions of UCC staff. It is possible that there are intangible factors that are associated with these small increases that are communicated emotionally, behaviorally, or interpersonally and create an increased effect on how therapists interacting with these clients experience their level of distress.

Another way that I looked at severity was by examining trends in mental health history of clients at first contact with UCC. Essentially, might perceptions of severity be increasing because some clients are posing a heavier clinical burden on providers? For example, the proportion of clients indicating they have a family member who has been diagnosed with a mental disorder has increased significantly over time. This is important because many mental health concerns can be hereditary (NIMH Genetics Workgroup, 1998) and may have impacted how the client was raised. When a family member has received an official diagnosis, it is likely that the concern significantly impacted functioning and/or involved significant symptoms to prompt the individual to seek treatment (resulting in diagnosis). More clients reported using psychotropic medication with time as well. This also suggests that more clients have ongoing mental health

diagnoses (that are severe enough to require medication) rather than temporary personal concerns to address in counseling. Alternatively, it may suggest that more clients are using medication to treat temporary concerns than previously. Additionally, the proportion of clients indicating they had previously attended counseling before coming to the UCC significantly increased over time. These measures of severity illustrate the changing population of college students who are utilizing counseling services. Given that there are significant increases in use of medication, prior counseling, and family history of mental health concerns, it is possible that this "experience" with mental health history may be impacting the way clients communicate with their therapists. They may be better equipped to articulate their concerns due to having a history of learning about communicating their distress and symptoms. It may also mean that clients may be more comfortable with or are experiencing less stigma around seeking mental health treatment than in prior years. If this is the case, this could impact their presentation in therapy (e.g., clients may feel more comfortable becoming vulnerable or talking about their distress, due to their prior exposure to mental health concerns, which could cause them to appear more distressed).

On the other hand, frequency of thoughts of suicide did not increase over time. So severity is not increasing when considered in these terms. No increases were found for clients reporting feeling angry enough at work/school to do something they might regret. Though this item may be interpreted in numerous ways, it may be used to capture clients considering homicidal or violent acts towards others. Clients' responses to encountering disturbing thoughts that they are unable to get rid of also did not increase over time. Also, some of the responses to mental health history did not demonstrate significant changes,

such as clients reporting prior hospitalization and prior suicide attempts. These indicators may be some of the more severe past behavioral incidents, which do not suggest increases in severity in these ways. Essentially, in some specific areas, clients are reporting increased severity at first contact with the UCC than in previous years, while in other areas, no significant changes were present.

Utilization

As anticipated, the distribution of utilization of services was skewed such that a small percentage of clients account for a disproportionately large percentage of service usage. Given that many university counseling centers are considered to primarily provide short-term counseling services, these results suggest that the clients who are seen for longer-term treatment are requiring a significant proportion of the resources.

Since there were no significant changes in the distribution of utilization throughout the time period, this skewed disproportion does not appear to account for the perceptions of increased severity. However, it does suggest that the phenomenon of some clients attending many more sessions than the mean is consistent. Additionally, it was evident that the number of total sessions attended increased with time. So, it is possible that this increase in amount of services provided could contribute to the perceptions of increased severity, particularly if there have not been proportional increases in staffing to accommodate the increased utilization. Furthermore, the number of crisis appointments increased over time. These types of appointments likely have a large impact on the perceptions of severity of staff (as they tend to involve urgent situations in which clients are in a high level of distress), and the increases in this area could be one factor

contributing to the perceptions that severity is increasing.

Predictors of utilization. The findings that many of the severity measures were related to utilization were as expected: those indicating initially higher distress utilized more services than those indicating lower initial severity. The fact that those with higher initial OQ-45scores attended more sessions suggests that their concerns may be more severe and tend to take longer to treat. This pattern of increased utilization with increased endorsement of distress was also the case with many specific OQ-45items that seem to capture more severe presentation (e.g., suicidal ideation, hopelessness, etc.). These items capture a level of distress significant enough for clients to attend more sessions.

Also, positive responses related to mental health history were related to increased utilization. Clients who reported taking psychotropic medication attended more sessions. This could be due to attendance of medication management appointments in addition to counseling sessions. However, this group included clients who previously and/or currently were taking psychotropic medication. It is also possible that these clients have more long-term presenting concerns and diagnoses, which results in increased utilization over time. Clients with prior counseling also used more sessions at the UCC. Although it is unclear whether they were seeking help for similar or different concerns, if they returned for similar issues, it may suggest their concerns are more severe and/or need continued treatment. Alternatively, it is also possible that these clients benefitted from counseling in the past and may be more likely to attend and persist in counseling. Clients reporting a prior suicide attempt as well as clients with any prior hospitalizations for mental health concerns used more sessions. These clients likely come in with more acute

concerns requiring more sessions to resolve, and possibly continued maintenance. Also, they may have increased utilization due to using a variety of different appointment types, such as crisis appointments.

Clients who reported having a family member diagnosed with a mental disorder utilized more sessions as well. This could be due to a genetic predisposition to similar mental health diagnoses requiring more prolonged treatment. It also could be due to familiarity with mental health treatment. If the client has endorsed this question, the client is aware of the diagnosis within the family member. It is possible that the family member has been treated through counseling and/or medication if he/she has received a diagnosis, which could have influenced the client's expectations of length of treatment.

All of these relationships between severity (mental health background and OQ-45 responses) and utilization were in the anticipated direction. This means that clients that were expected to take longer to improve or resolve their issues tended to use more sessions before terminating treatment. Since these clients used more sessions, they are likely to be more memorable to staff (e.g., a therapist may be more impacted by the client with a higher OQ-45 score and a prior suicide attempt who attended 15 sessions than the client with a lower OQ-45 score with no prior suicide attempts who attended 4 sessions) and could be contributing to the perception that severity is increasing.

Limitations

This study had several limitations to take into consideration. First, the data were from only one UCC. This UCC is a large, public university, capturing a specific sample of college students, faculty and staff in Utah, with a large proportion of students from the

Church of Jesus Christ of Latter-day Saints (LDS, or Mormon) compared to other universities nationwide. Additionally, this UCC has a large number of staff and a significant training component. Therefore, this study may not be generalizable to other UCCs, much less other mental health settings. Another limitation is that, though the study covers a 12 year time period, there have been some changes to the possible responses in demographic information and what questions have been asked throughout the time period. Additionally, some of the intakes, particularly in 1999, may not have been the client's first appointment at the UCC if they attended sessions in a prior fiscal year.

Though I used a variety of data to measure severity, the measures used only captured certain aspects of severity. The college client population may be shifting in other ways that are not captured by the measures used. Additionally, all of the measures and information were based on self-report of the clients. There are several limitations of self-reported data. First, clients may be unaware of or may not remember history accurately, which could particularly impact responses on the intake paperwork (e.g., they did not know that their grandmother was diagnosed with depression or forgot they were prescribed psychotropic medication as a child). Second, particularly since the measures used were typically gathered at the client's first appointment, they may be exaggerating their responses due to a current state of distress. There is also variation in how individual clients interpret and respond to items, particularly Likert scale items (e.g., on the OQ, one client may interpret "rarely" as once in the past week, while another may consider once a day to be "rarely"). This could impact the interpretation of the results: for example, the slight increase in total OQ-45scores over the years could be attributed to differing

interpretations of the items rather than an absolute change in distress level. Essentially, self-reported data cannot be independently verified.

Clinical Implications

The results related to trends in severity are beneficial in teasing out the ways in which the clients seeking services at this UCC are changing. With more clients reporting use of psychotropic medication, prior counseling, and a family member diagnosed with a mental disorder, this may change the way treatment is approached. It may have implications for the clinical model and speak to areas where it may be beneficial to expand outreach efforts or group therapy accordingly. For example, if more clients have a family member diagnosed with a mental disorder, this could be broken down further and tailored to the student population. If more students have a family member diagnosed with an anxiety disorder, and the college environment may increase this disposition, the student population may benefit from providing more workshops related to managing anxiety or more groups focused on anxiety. Perhaps clients with prior counseling may be more comfortable and experience less stigma around counseling due to prior experience and could benefit from groups to address their current concerns.

The findings that total OQ-45scores, as well as some specific OQ-45items, increased over time also have important implications, as they illustrate part of what clients are experiencing internally when they come in to the UCC. Though the increases were small, clients are more likely to be feeling hopeless about the future, thinking something is wrong with their minds, and feeling that something bad will happen. However, they are not more likely to be considering suicide or feeling angry enough to

do something they might regret. These trends give guidance related to the focus of treatment, as they reflect internal subjective distress is increasing, though specific thoughts tied to behavior are not increasing. The increases in specific OQ-45items could be target areas to address in treatment as they relate to the client's concerns. It may be helpful to consider these more closely in working with clients. For example, how might a cognitive approach be impacted by a client who feels there is something wrong with his or her mind? How could an existential approach address hopelessness about the future? With more clients reporting these items, outreach efforts could target these areas as well. For example, with more clients feeling that something bad will happen, an outreach involving further exploration of their fears about the future could be helpful. (Students could write their concerns on paper and use a symbolic gesture—put them in a box, shred them, post them, etc. Then students could participate in a mindfulness activity and learn ways to manage anxiety.)

In addition to some shifts in the responses to clients' experience of symptoms as well as mental health history, there is an overall trend in increasing utilization of services. Though the mean number of sessions utilized per client was relatively stable, the overall sessions attended increased over time. This means that more students are using services. A positive interpretation of this could be that there is reduced stigma around seeking help for mental health concerns. While this may be the case, it is possible that other factors are also contributing to the influx in visiting the UCC.

Perhaps more students with mental health concerns are being admitted to college than previously. While this possibility may allow for increased opportunity for students as well as increase the diversity of the student population, it creates additional demand

for UCC services. With more students coming to the UCC reporting a history of prior counseling and or medication, it may be helpful to find a way to coordinate continued care for these students in advance. For example, if a student is moving from out of state and has been engaging in counseling for OCD for the past 2 years, it may be beneficial to arrange for community treatment beginning when the student arrives that can provide continuity of care throughout the student's time at the university. Of course, the university is often unaware of any mental health concerns upon the student's arrival. So perhaps information could be mailed to the student and student's parents upon acceptance of admission that would provide them with information about community resources. Also, since summer demand at UCCs tends to be lower, this could be a good time for students and their parents to call to consult about arranging for assistance with connecting with a community treatment provider.

Another possibility is that increase in the presence of and reliance on technology and social media has impacted the communication and social connection of this generation of college students. The presence of Facebook, twitter, and other various social media sites are not without their benefits; however, it seems that it exposes students to a selective portrayal of the lives of their peers. This allows for more comparison, and often a skewed comparison. Before the emergence of these sites, there was less means to have frequent contact with peers from past social circles (e.g., once the student goes away to college, they no longer know what is going on in the life of most of their peers from high school, with the exception of perhaps a few closer friends that the student keeps in touch with and has a more complete, and accurate, perception of their life). It is possible that some students are now looking to other venues and campus

resources to meet their needs for social connection. Counseling often provides a safe, empathic connection that may be even more valuable if students are feeling more lonely or isolated. This could be one factor contributing to the increase in utilization at UCCs. While the therapeutic relationship is often a benefit of engaging in counseling, if this is a primary motivating factor for engaging in treatment for some students, perhaps there are other ways for the campus community to meet this need (e.g., residential life, clubs/organizations, mentorship programs) to free up resources for UCCs to focus on other clients in need.

If it is possible to predict utilization based on paperwork at intake, this could provide insight related to treatment disposition, as it increases the amount of information regarding potential utilization. Some clients whose concerns seem to require longer-term treatment are referred to community providers. Often, this decision is made through the clinical judgment of UCC staff, based on various factors, including previous treatment, OQ-45score, nature of concerns, etc. The results of this study support the relationship between many of the variables involved in clinical judgment for referrals and actual utilization of services over time. This information can help UCCs be more selective in which longer-term clients they refer out and which they will treat on site. For example, one possibility is to accommodate the increase in clients who have had prior counseling experience or psychotropic medication use through connecting them to community providers for more continuous longer-term care (particularly if their counseling experience was recent and for similar presenting concerns, and after other factors are taken into consideration, e.g., insurance).

In looking at the distribution of utilization, it is clearly skewed. There exist two

groups of clients: a large group of clients who each use just a few sessions, and a small group of clients who each use many sessions. The former group of lower utilizers seems to be using services the way UCCs have been designed: clients come in for short-term treatment. While some of them do return later in their academic careers for additional treatment, treatment episodes are limited to a few sessions. The latter group of high utilizers use a disproportionately large amount of services, with many of them using over 100 sessions each. It may be helpful for UCCs to better understand this group, because it is unclear what the effect of continued treatment is. It is possible that continued attendance of sessions is offering incremental symptom reduction, maintenance, or prevention of worsening symptoms for higher-risk clients. However, it is also possible that clients are not benefitting from continued treatment. It could be that treatment has become a habit, the client has become dependent on treatment, or another type of treatment setting or approach may be more effective. Perhaps UCCs could identify clients who have exceeded a certain number of sessions and begin implementing measures to determine what the best course of action is for each of these clients. This could involve administering additional measures specifically related to their presenting concerns. If the client is returning to treatment for a new episode or school year, it may also be helpful to look at whether the client is coming in for a similar or different presenting concern. Furthermore, looking back at the treatment history regarding whether the client has been seen by the same provider or multiple providers may be useful. Then, the clinician could have a conversation with the client to better understand what the client's past experiences in treatment have been like up to this point and what the client's needs are moving forward. More closely tracking the progress and well-being of these clients could

significantly impact the availability of resources, even if a few of them were treated more efficiently or referred to the community for more specialized or long-term care if appropriate.

All of these findings seem to point towards a values conflict regarding the current mission of UCCs. It seems that the UCC is tasked with managing the mental health of the campus of the whole, with prevention efforts and a short-term treatment model as its design. Yet, there is often an expectation that the UCC also manage higher risk clients (e.g., homicidal, suicidal) and client's who require longer-term care. These clients often raise concern on behalf of university staff and administrators, even if their concerns may be outside of the scope of the historical purpose of UCCs. When these clients use more resources, it detracts from the ability to serve other students and the campus in other ways. Student retention is a high priority for university administration; however, this ultimately raises the question about what the university is willing to provide to increase chances for students to persist and graduate. For students with mental health concerns, how involved does the university want to be regarding mental health treatment, and does this necessitate increased UCC resources to address these needs?

Recommendations for Future Research

Given that this study indicates severity is increasing in certain ways in recent years, it would be beneficial to replicate this research in other UCCs to identify nation-wide changes in different types of severity. Additionally, the skewed distribution of utilization may be a nation-wide trend in UCCs, or it is possible that the distribution may look different in various UCCs. For example, it could vary geographically, between

private and public colleges, whether or not the UCC has session limits, in-state vs. out-of-state student ratios, or various other factors that distinguish colleges and the students they attract. Also, it may be helpful to conduct a qualitative study on UCC therapists' perceptions of increases in severity. This could include a focus on various contextual factors, such as whether perceptions of severity increase following a significant event on campus (such as a suicide). A qualitative study may help fill in some of the gaps related to the relationship between quantitative data and perceptions of UCC staff regarding severity.

The trends identified were initial analyses. It may be helpful to look more closely at these utilization trends. For example, just because high utilizers are using the same proportion of services from year to year, and the overall session means are stable, there could be changes occurring in trends with the groups of middle and low utilization groups.

Another important direction to further explore is the high utilizers group. Since this group utilizes a disproportionately large percentage of services, it would be helpful to learn more about them to better understand why they are using more services. This could start with looking at demographic variables, presenting concerns, mental health history, and various other factors, such as examining their case notes. It also may be helpful to better understand treatment modality for the high utilizers to see if they are using different appointment types than low utilizers. Implications for systematic changes may vary if high utilizers tend to attend more group or medication management appointments, for example. Then, it may be beneficial to use general or specific (based on presenting concern) outcome or symptom measures to track client progress (e.g., OQ-45, BDI,

PHQ). It would be interesting to determine how much incremental benefit clients are experiencing with continued treatment.

Conclusion

The results of this study contribute a more recent examination of severity trends at a UCC. Though the results were mixed regarding whether or not severity increased, this is reflective of the literature, as results varied based on how severity was measured and defined. The results of this study do reflect various changes in the client population at this UCC, such as significantly more clients reporting use of psychotropic medication, prior counseling, and family history of mental health concerns. These changes could contribute to the perceptions of UCC staff that severity of clients is increasing with time. Additionally, the utilization of sessions is highly skewed such that a small percentage of clients use the majority of services. Also, the results of this study indicate that clients with higher severity (higher initial OQ-45 score, history of suicide attempt, prior counseling, etc.) tend to use more sessions. Therefore, any changes or increases in severity within the group of high utilizers would have more of an impact on perceptions of increasing severity, as they are attending, on average, significantly more sessions than most clients (most clients attend 1-2 sessions).

There is literature that supports the trend of skewed distribution of utilization of health care services, and raises questions about the current mission of UCCs. This study suggests a similar trend in one type of mental health service setting. UCCs may benefit from increased funding and resources to better position them to address the evolving college population—because clients are presenting with more significant mental health

histories and reporting more distress in some areas, some clients may need longer-term mental health services. Increased resources to address these changes would likely benefit retention, academic performance, and overall well-being of the college student population. Ultimately, on a much larger scale, the skewed distribution of utilization could have implications for the structure of mental health care as a whole. A more effective screening process could be used to predict utilization and consequently improve efficiency by connecting clients with the most appropriate level of care and allowing for increased specialization in treatment approaches.

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